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DIGEST OF MUNICIPAL AIR POLLUTION ORDINANCES

Public Health Service, Washington, D.C.

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DIGEST OF MUNICIPAL AIR POLLUTION ORDINANCES

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This digest of ordinances of selected metropolitan communities, primarily with a population of over 50,000, illustrates the various and divergent approaches followed in dealing with air pollution problems. The 107 ordinances reported emphasize the importance of developing standards, codes, rules, and regulations governing the emission of air pollutants on the basis of technically accepted criteria, and on a consideration of local conditions, such as topography, meteorology, industrial development, degree of urbanization, and land-use planning.

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BASIC ELEMENTS OF AIR POLLUTION CONTROL ORDINANCES

Introduction

Recent decades have witnessed a spectacular rate of urbanization in the United States, and today 70 percent of the Nation's population lives in urban areas. The rapidly increasing concentration of people, industries and vehicles in the metropolitan and other urban areas has brought an increasing burden of air pollution which is recognized as a threat to the public health and welfare if permitted to go unchecked.

This problem is not limited to central cities. In the last decade (1950-1960), metropolitan area growth constituted 85 percent of the total national population increase, but more than three-fourths of this growth in the metropolitan areas took place in the suburbs outside the central cities. This suburban growth has been accompanied by extensive commercial and industrial decentralization. In many cases, an area may be affected by air pollution from sources outside its jurisdiction and lying within two or more separate jurisdictions, thus complicating the legal problems of air pollution control.

The urbanization process and our industrial growth have made painfully clear that air, like water, is a limited resource. The discharge of waste products into the atmosphere can adversely affect health, comfort, and property. The multiplicity of sources, the cumulative nature of the damage inflicted, the inter-action of pollutants, and the broad area of potential injury require governmental action for effective control.

Air pollution control starts with the premise that no one has the right to use the atmosphere as a receptor of wastes in a manner which will adversely affect the health, comfort or property of others.

The goal of air pollution control legislation should be to maintain a degree of purity of our air resources consistent with: (a) the promotion of the public health and welfare; (b) the protection of plant and animal life; (c) the protection of property and other resources; (d) the visibility requirements for safe ground and air transportation; and (e) continued economic development and growth.

It is too well settled to admit of argument that the State in the exercise of the police power may enact and enforce legislation to prevent, control and abate air pollution. The authority of the state to delegate this power to its counties and cities is also well settled. The scope of this authority is not limited to air pollution which constitutes what is recognized as a public nuisance, but extends to conditions which the legislature reasonably determines constitutes a hazard to the public health, safety or welfare.

As the Supreme Court of the United States declared in *Huron Portland Cement Co. v. City of Detroit* 362 U.S. 440, 80 S. Ct. 813 (1960), upholding a smoke control ordinance of the City of Detroit:

> "The Ordinance was enacted for the manifest purpose of promoting the health and welfare of the City's inhabitants. Legislation designed to free from pollution the very air that people breathe clearly falls within the exercise of even the most traditional concept of what is compendiously known as the police power."

The exercise of the police power by municipalities must, of course, be in conformity with the statutory grant of authority. While the proper exercise of such power may result in the restriction of the use of property, such a restriction is not a "taking" in the constitutional sense so as to require the payment of compensation.

Every person holds his property subject to the proper exercise of the police power either by the Legislature directly, or by public or municipal corporations to which the Legislature may delegate it. Laws and regulations of this character, relating to the comfort, health, convenience, good order, and general welfare of the inhabitants, though they may disturb the enjoyment of individual rights, are not unconstitutional, even though no provision be made for compensation for such disturbances. They do not appropriate private property for public use, but simply regulate its use and enjoyment by the owner. If he suffers injury, it is either damnum absque injuria (damage without a legal wrong), or in theory of the law, he is compensated for it by his sharing the general benefits which the regulations are intended and calculated to secure. (Munn v. Illinois, 94 U.S. 113, 24 L. Ed. 77).

In sum, it is clear that the legal machinery to control air pollution which injures or imperils the public health and welfare may be established under the police power of the State. The State may delegate the police power to a municipality or other public agency which may, within the scope of the delegation, properly enact an air pollution control ordinance. The legislation or ordinance must establish adequate standards to guide the enforcing agency, and its requirements should not be arbitrary but reasonably related to the purpose sought to be accomplished. Within these restrictions, there is a large liberty of choice in the means employed to limit emissions causing or contributing to air pollution.

Elements of an Air Pollution Control Ordinance

Administrative and Enforcement Provisions

The administrative and enforcement provisions of an air pollution control ordinance embrace five main features:

(1) Declaration of policy (optional);
(2) Definitions;
(3) Administrative agency--organization, functions, and powers;
(4) Operating provision;
(5) Enforcement.

(1) Declaration of Policy

The purpose of a declaration of policy is two-fold: first, to fortify the ordinance against attack on constitutional grounds; and second, to serve as a guide to the Courts and administrators in interpreting and applying the substantive provisions of the law.

With respect to the first purpose, declarations of policy are frequently incorporated in ordinances where the local government undertakes to exercise control over a field not previously subject thereto. Air pollution control ordinances, however, are clearly justified as an exercise of the police power properly delegated by the State in furtherance of the public health, safety, and welfare.

With respect to guiding courts and administrators in construing and applying the laws, it may be observed that the substantive provisions should be so clearly worded that they will speak for themselves. However, a declaration of policy, if properly framed is helpful in promoting support for the law and cooperation in its observance, as well as establishing the goals of the legislation. The main rule to be observed in drafting a declaration of policy is to make it broad enough to fully present the basic policy elements underlying the ordinance and to avoid any language which may restrict the construction or application of substantive provisions of the legislation.

(2) Definitions:

Definitions are important to clarify the meaning of terms which are not self-explanatory and to adopt short terms or titles which may be used in the body of the act to save language. The cornerstone of any pollution control law is the definition of air pollution. It should be broad enough to cover every type of contamination or alteration of the physical or chemical properties of the air that will or may be materially harmful.

A definition section is an integral part of comprehensive air pollution control legislation. This section is important to the administration and interpretation of the statute and unduly restrictive or vague definitions should be avoided. "Air pollution" may be defined as the "presence in the outdoor atmosphere of one or more air contaminants or combinations thereof in such quantities and of such duration which are or may tend to be injurious to human, plant, or animal life, or property, or which unreasonably interfere with the comfortable enjoyment of life or property, or the conduct of business." This language makes it unnecessary to show that life or property already have been injured or that their comfortable enjoyment is already unreasonably disturbed, so long as the pollution situation is generally known to effect those results. The definition encompasses the preventive and abatement aspects.

(3) Administration

(a) Administrative Agency

In legislation which would authorize an air pollution control program, it is essential that there be a specific designation of an agency responsible for the administration of the program. The problems of air pollution control concern interests other than health. Consequently, the agency established or designated to administer the program should take into account the interests and views of all affected groups, in addition to public health considerations.

With the advent of air pollution affecting municipalities or extended metropolitan areas, a single agency armed with adequate air pollution control authority became necessary. The level of authority (city, county, etc.) necessary to control air pollution is determined primarily by the character of the pollution zone. If the boundaries of a city contain the pollution zone, then a municipal agency may suffice. If the pollution zone is larger than the municipal area, or include several political jurisdictions, then the control effort must be conducted at a higher political level-at the county or on a multijurisdictional level adequate in area to effectively meet the problem.

(b) Functions of Control Agency

Among the most important of a wide range of functions which may be assigned to the agency are the following:

(1) To administer and enforce the pollution control law;

(2) To adopt regulations and standards;

(3) To issue orders for the prevention, abatement, or control of pollution,

(4) To require the submission of plans for equipment and facilities which are potential sources of air pollution;

(5) To issue or deny permits for the construction of such equipment and facilities.

(c) Delegation of Legislative Power

In connection with provisions authorizing the agency to adopt regulations which are to have the force of law in setting standards, or dealing with other matters, it is essential that the ordinance itself should set forth the basic general principles, policies, or objectives governing the action of the agency on the subject matter. If the law simply gives the agency unlimited discretion in such matters, it may be held invalid as an unconstitutional delegation of legislative power. Under properly framed provisions, the agency is not authorized to make any law itself but simply to make investigations and determine the circumstances under which the basic provisions of the law shall apply to particular situations--an administrative function which the legislature cannot very well perform itself.

(d) Air Quality Standards

Emission limitations promulgated by an administrative agency have legal force and their violation is made unlawful; conversely, discharges which comply with such standards are not air pollution within the meaning of the ordinance. In view of the number of persons affected by such limitations, generally, ordinances require that their adoption be preceded by a public hearing open to all residents of the areas affected, and that adequate notice be given. Such ordinances also provide that, in the establishment of such standards, the administrative agency will be guided by the principle of constantly seeking to improve the air quality to the maximum extent practicable.

(e) Advisory Council or Committee

The establishment of an advisory council is considered desirable. The membership of the advisory council should be as large as necessary to provide effective representation for all groups having any substantial interest in pollution control.

The provisions for an advisory council should name or clearly define the important known groups entitled to representation and prescribe the manner of selection of the members.

An advisory council may have various functions including the making of recommendations to the governing board on major policies and problems of public interest and to promote public and legislative support for the pollution control program.

It should be made clear that the recommendations of the advisory council are advisory only and not binding on the governing agency. The agency should have full authority and responsibility for making decisions, so that the existence of the council will neither weaken the authority of the agency nor give that body an opportunity to shift responsibility to the council.

(4) Operating Provisions

(a) Public Nuisance

A version of the common law nuisance is established by a law which prohibits any air contaminants which have a detrimental effect on the health, comfort and property of any considerable number of persons. Because the nuisance approach does not incorporate specific objective standards, a violation of this type of provision must be established on its own merits in each case.

In this connection the concept is being more generally accepted that the police power of properly authorized local government extends to the regulation of air pollution without regard to whether the condition constitutes a common law or statutory nuisance. The validity of an ordinance regulating the emission of pollutants does not depend upon whether or not it is in fact a nuisance. Nor does it add to the legislation to declare that such emission constitutes a public nuisance.

The criteria used to judge the validity of a statute regulating conduct which does not constitute a common law nuisance are those applied to determine the proper exercise of the police-power--namely, that the statute is reasonably necessary for the accomplishment of the purpose and for the public welfare, is not unduly oppressive, does not arbitrarily interfere with private property or impose unnecessary restrictions upon its use.

(b) Maximum Permissible Emission Standards

Some ordinances authorize regulations which prohibit quantities of contaminants from a specific source in excess of standards specified. The standard may be stated in terms of (1) maximum opacity, shade, or optical density of the effluent (Ringelmann Standard), together with a time limit, (2) a maximum dust or particulate, or contaminant gas loading for effluent emissions either in terms of grains per unit, volume of stack gas, gas volume, or weight of contaminant lost per weight of materials processed in equipment.

(c) Regulation of Use of or Design of Equipment

Another approach authorizes the regulating of the equipment or process constituting the source of pollution to the extent considered necessary to accomplish the desired reductions in the emission of air contaminants. This may be done by (1) banning the use of a certain type or category of equipment or activity, (2) establishing design standards for usable equipment, (3) establish operational standards, and (4) requiring the use of specific types of control equipment or control techniques.

Underlying this approach is the assumption that compliance with the requirements will assure that the operation of the equipment or activity will not violate any of the other prohibitions contained in the ordinance or regulations such as the public nuisance or the maximum permissible emission provision.

(d) Regulation of Fuels or Fuel Composition

Where certain fuels are a source of air pollution, the use or composition of such fuels may be regulated by such means as requiring the washing, coking, briquetting of coal, etc., the specification of smokeless grades of fuels, the reduction of the sulfur content of fuel oils, reduction of the olefinic hydrocarbons in gasoline, regulation of liquid vapor pressures, etc. In such cases, regulation usually affects the producer or vendor, rather than the consumer of these fuels.

(e) Permits or Registration

An effective technique for control of air pollution sources is a permit system. Plans, specifications, and other data are submitted to the Agency for approval in the light of the prescribed standards. Through this means, the agency can condition its approval on the provision of controls adequate to protect the air resources of the jurisdiction and to meet the requirements on the emission of pollutants. There is, on the other hand, a group of authorities who prefer a procedure which requires registration of all sources of regular or anticipated emission above some minimum size. The possible use of permit and registration systems, might in certain cases, prove desirable.

(5) Enforcement

Ordinances now in effect provide a variety of methods for proceeding against any alleged pollutor. It is made unlawful to cause any pollution of the air in the area of jurisdiction in terms of the definition of air pollution, or to violate any order issued by the agency, including an order classifying areas of the jurisdiction or establishing limitations on emission of air pollutants. In some cases air pollution is declared to be a public nuisance and is therefore subject to abatement in accordance with the practice for abatement of nuisances.

The violation of the provisions of such ordinances, or order, or a determination by the agency of failure to perform any duty imposed by the ordinance may be declared to be a misdemeanor or may be subject to specific penalties, such as a fine for each violation. In many ordinances the control agency is empowered to issue orders against alleged pollutors after adequate opportunity for hearing. Such orders, if not appealed through the courts, become final and a failure to comply is punishable by fine or imprisonment. The same administrative procedure, with opportunity for a hearing, is employed in the case of revocation, denial, or modification of permits.

Many of the ordinances provide that appeals may be taken to the courts from orders of the control agency. Such appeals do not generally involve trial de novo but are primarily reviews of the legal propriety of the agency's decision. If the prescribed statutory procedure has been followed and the determination is supported by substantial evidence, the order of the agency will usually be affirmed by the court. On the other hand, in a trial de novo the Court is authorized to exercise its independent judgment on the evidence and to make an independent determination of the reasonableness and legality of action on all issues of law, facts, and mixed questions of law and facts and opinions therein involved.

Ordinances occasionally provide for enforcement of the provisions of the law or orders of the agency by injunction proceedings, as in case of abating a public nuisance. This is a well-recognized form of civil action, and is effective where compliance cannot be obtained by ordinary punitive action.

Conclusion:

The digest of air pollution control ordinances presented in the following pages illustrates the various and divergent approaches which have been followed in dealing with air pollution problems.

They emphasize the importance of developing standards, codes, rules and regulations governing the emission of air pollutants on the basis of technically accepted criteria, and on a consideration of local conditions, such as topography, meteorology, industrial development, degree of urbanization, and land-use planning.

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FOREWORD TO DIGEST

This Digest of Municipal Air Pollution Ordinances of selected metropolitan communities was prepared by the Health Law Center, Graduate School of Public Health, University of Pittsburgh for the Division of Air Pollution, Public Health Service, U. S. Department of Health, Education and Welfare pursuant to Contract No. PH 86-62-210.

In collecting these ordinances, attention was directed primarily at jurisdictions with a population of over 50,000. Since there is no central depository where these ordinances are readily accessible it was necessary to write to each such jurisdiction and to those municipalities with an air pollution control agency.

In response to our inquiry, 59 municipalities indicated that they had no air pollution control ordinances; 161 jurisdictions did not respond within the deadline set for the completion of the Digest. In all, 107 ordinances or regulations have been included.

The form of the topical outline was intended to facilitate classification of the pertinent provisions of the ordinances treated herein. Items I and II of the outline provide the name, number and date of the ordinance and a general description of its major features. Item III lists the agency or officer charged with the duty of enforcement and an enumeration of the powers granted under the ordinance. Item IV describes the scope of the ordinance in terms of the sources of contamination and the specific pollutants it regulates and controls. Item V outlines methods of enforcement. This Item also indicates hearing and appeal procedures available to aggrieved persons. Item VI describes those programs which attempt to provide long-range control, such as those requiring registration, the issuance of permits, licences or certificates. A final Item VII is used to indicate miscellaneous matters not directly within the scope of the six major items. This outline was designed to be an aid to the orderly presentation of the material, it was not imposed rigidly upon the ordinances digested, rather, it was used as a flexible standard by which the wide variety of approaches to the problem of air pollution control could be treated under one format. It should be further noted with reference to the format that slashes are used in place of parentheses.

The Health Law Center, in the preparation of this Digest, had the fullest cooperation of Mr. Samuel M. Rogers, Division of Air Pollution and Sidney Edelman, Esq., Office of General Counsel, U. S. Department of Health, Education, and Welfare. Moreover, the Digest could not have been written without the help of the numerous agencies and individuals throughout the nation who responded to our inquiries and requests for materials. Health Law Center staff who had principal responsibilities in this project were Miss Clara Mattern and Jan Swensen, Esq. In addition, Mrs. Joan Jacobs, Mr. Edward Pearson, Miss Marjorie Morrison and Mr. Thomas Walsh rendered invaluable assistance during the Project.

Eric W. Springer, Esq.
Health Law Center
Graduate School of Public Health
University of Pittsburgh
October 15, 1962

BIRMINGHAM, ALA.

I. Ordinance

Ordinance No. 523F.

II. General Statement

Ordinance prohibits dense smoke, regulates fuel burning and mechanical fuel feeding equipment and stacks, requires approval of specifications for erection or installation of equipment, provides for the issuance of permits and certificates of operation and imposes penalties.

III. Administrative Organization

A. Chief Smoke Abatement Inspector, has the duty to administer and enforce ordinance. /sec. 14/.

B. Smoke Abatement Board, composed of 5 members, appointed by City Commission. Duties include:

1. Advising Chief Smoke Abatement Inspector in respect to means and methods of abating excessive smoke.

2. Hearing appeals from actions of Chief Smoke Abatement Inspector. /secs. 7, 8/.

IV. Applicability

A. Sources

1. Hot Water Heaters

Use of high volatile fuel in any hot water heater, prohibited, unless it is equipped with an approved smokeless furnace or approved stoker. /sec. 9/.

2. Open Fires

/a/ Burning of any paper, garbage, rubber tires, storage batteries, automobiles, scrap, waste, refuse or other combustible material in an open receptacle, prohibited.

/b/ Use in an open receptacle of any fuel other than coke or charcoal, for purpose of heating tar or asphalt, prohibited, except that oil in an approved oil burner may be used. /sec. 10/.

3. Railroad Locomotives

Emission into atmosphere from locomotive of smoke of No. 3 Ringelmann or darker prohibited, except:

/a/ During period of 20 minutes after ignition of any fire in cold locomotive, or

/b/ Commencement of cleanout of any furnace or firebox in a warm locomotive,

smoke of No. 3 Ringelmann shade permitted, and during such 20 minutes, smoke of a darker shade for not exceeding an aggregate of 6 minutes, and after such 20 minute period, smoke of No. 3 shade or darker for not exceeding 1 minute in any period of 9 consecutive minutes.

/c/ Locomotives assigned temporarily to yard service in case of accident or other emergency are excepted from section. /sec. 11/.

B. Specific Pollutants

1. Dense Smoke

Emission into atmosphere from any fuel burning equipment of smoke of No. 3 Ringelmann or darker, prohibited, except:

/a/ During period of 20 minutes after ignition of any new fire, or

/b/ Commencement of cleanout of any furnace,

smoke of No. 3 Ringelmann shade permitted, and during such 20 minutes, smoke of darker shade for not exceeding an aggregate of 6 minutes, and after such 20 minutes, smoke of No. 3 Ringelmann shade or darker for not more than 3 minutes in any period of 30 minutes, provided, smoke of No. 3 Ringelmann or darker for more than an aggregate of 20 minutes in any period of 60 consecutive minutes prohibited. /sec. 2/.

V. Enforcement

A. Unlawful Acts

1. Operation of combustion equipment on locomotive so as to emit smoke of prohibited shade or density, or allowing smoke of prohibited shade or density to be emitted from smoke stack of any locomotive, not excepted from provisions is a misdemeanor. /sec. 11/.

Exceptions:

/a/ Railroad Locomotives

Provisions of ordinance relating to dense smoke, approvals, permits, fees, hearings, hot water heaters, and open fires and inspection, not applicable to railroad locomotives.

/b/ No provision of ordinance applies to any presently existing installation in any presently existing building or structure designed for residential occupancy of two families or less and situated outside of "critical smoke area", as defined. /sec. 13/.

2. Interference with inspection of Chief Smoke Abatement Inspector. /sec. 15/.

3. Falsely representing that fuel burning or fuel feeding equipment has been approved by the Inspector. /sec. 5/.

B. Inspection

Chief Smoke Abatement Inspector has right to visit any fuel burning or fuel feeding equipment, or any stack, during reasonable daylight hours. /sec. 15/.

C. Procedure

Person aggrieved by action of Inspector in giving or withholding of approval or of permit has right of appeal to Smoke Abatement Board, which shall be promptly heard and decided. After reasonable notice of hearing to Inspector, Board shall approve, modify or reverse decision of Inspector. Decision of Board to be written and copy delivered to appellant and to Inspector. Inspector to promptly act in accordance with decision. Board does not have jurisdiction of conflicts between the Building Inspector and the Chief Smoke Abatement Inspector. /sec. 8/.

D. Penalties

Violation of ordinance punishable in accordance with provisions of sec. 4 of the General Code of the City of Birmingham. /sec. 17/.

VI. Preventive Programs

A. Equipment Approval

1. Installation or erection of fuel burning equipment or mechanical fuel feeding equipment as part of building or structure, cannot be made unless such equipment has been approved by Inspector; installation erection, reconstruction or structural alteration of such equipment cannot be made unless specifications for such work have been approved by Inspector.

2. Erection, construction, reconstruction or structural alteration in or as part of building or structure cannot be made unless stack or the specifications for such stack have been approved by Inspector. /sec. 4/.

3. Specifications deemed approved if so marked by Inspector. Any device, contrivance or instrument deemed approved if approved in writing by Inspector, or if in conformity with approved specifications. /sec. 5/.

4. Inspector may issue certificate of approval of specifications for reconstruction or structural alteration of fuel burning or fuel feeding equipment when they are found by him to be adaptable for use without violating dense smoke provisions.

5. Inspector may issue certificate of approval for erection, construction, reconstruction or structural alteration of stacks found by him to be adaptable for use without violating dense smoke provisions.

6. Inspector may issue general approval of makes, models or kinds of fuel burning equipment which may be adaptable for use without violating dense smoke provision. It is duty of Inspector, upon request, to make adequate and reasonable inspection or test of equipment sold and intended for use in City.

7. Approval of Inspector not exemption for violating dense smoke provisions. /sec. 5/.

B. Permits

1. Installation, reconstruction, or structural alteration of any mechanical fuel feeding equipment cannot be made unless a permit has been issued by Inspector, upon payment of fees, listed in sec. 12, provided such equipment has been approved and a certificate of approval issued, and provided, considering the size, capacity, intended location and use of such

equipment it can be operated without violating dense smoke provisions.

2. Stack cannot be erected in or as part of any building or structure, or constructed, reconstructed or structurally altered unless a permit for such work has been issued by Inspector, upon payment of fees listed in sec. 12, and provided that, according to the plans and specifications for such stack, it will be adapted for use without violating dense smoke provisions.

3. It is duty of Building Inspector and Chief Smoke Abatement Inspector to collaborate so as to avoid conflicts in respect to installations and work; any conflict shall be determined by the Commissioner of Public Improvements. /sec. 6/.

TUCSON, ARIZ.

I. Ordinance

Ordinance No. 1776 /November 18, 1957/ enacting sec. 37A of Chapter 18 of the Code of the City of Tucson.

II. General Statement

Ordinance regulates burning in open fires, bonfires, incinerators or other burning devices. It requires permits and provides penalties.

III. Administrative Organization

Chief of the Fire Department, given the power to issue permits. /sec. 37A-3/

IV. Applicability

A. Sources

Burning of garbage, rubbish, trash, grass, clippings, tree prunings, waste trade materials, junk auto bodies or parts, tires and any other articles in open fires, bonfires, incinerators or burning devices, or in any manner prohibited except as permitted. /sec. 37A-1/.

B. Specific Pollutants

Dense smoke, defined in sec. 37A-6 as, any smoke so heavy and thick that it substantially obscures any object from plain visibility, or any smoke through which an object can only be seen dimly, or any smoke which is heavy enough to substantially cloud and blanket the surrounding neighborhood atmosphere, or that smoke which has a density of No. 2 Ringelmann or greater.

Acrid or offensing odors or vapors, sparks, fly ash or other harmful elements. /sec. 37A-3/.

V. Enforcement

A. Unlawful Acts

Kindling, maintaing or authorizing any open fire or bonfire, or using or operating any incinerator or other burning device outside a regular building without a permit. /sec. 37A-2/.

B. Penalties

Person violating ordinance guilty of misdemeanor and punishable in accordance with provisions of Section 5 of Chapter 1, of the Code of City of Tucson. /sec. 37A-7/.

VI. Preventive Programs

A. Permits

Required for any fires or acts specified above. Written application to be made to Chief of Fire Department. He shall issue the permit when he has determined by examination and investigation of the premises and burning devices, proposed to be used, that such fire or burning will not cause dense smoke, acrid or offensive odors or vapors, sparks, fly ash or other harmful elements to travel more than 100 feet from the point of origin, in any area or neighborhood where buildings are closer together than 100 feet. In all other areas permit may be granted when surrounding conditions, character and location of buildings, method of proposed burning, devices used, and any other factors assure that dense smoke, acrid or offensive odors or vapors, or other harmful elements resulting therefrom will not travel through or onto surrounding homes or buildings or will not injuriously or adversely affect neighboring areas.

Whenever Fire Chief determines and finds that granting of permit will create a fire hazard because of close proximity of buildings or other physical conditions present, no permit shall be granted.

No charge to be made for permit.

Exception to permit requirement, specified for use and operation of homestyle broilers, barbecue pits, grills, or other similar cooking devices.

AIR POLLUTION CONTROL DISTRICT
# of the
BAY AREA, CAL.

I. Area of Jurisdiction; Regulations

Bay Area Air Pollution Control District, established by Chapter 2.5 of Division 20 of the Health and Safety Code of California, includes the counties of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, Napa, Solano and Sonoma. District does not operated in last three counties.

Regulation 2, May 4, 1960, as amended January 1, 1962.
Regulation 1, March 20, 1957, as amended January 1, 1962.

II. General Statement

Regulation 1, controls the burning of combustibles in the open. Regulation 2, controls emissions of air contaminants from incineration, salvage, heat transfer, general combustion and general operations. Regulation 2, requires registration of persons responsible for emissions, and provides standards for calculation and sampling methods and analytical procedures. Definition of person includes a government agency and public officer.

III. Administrative Organization

A. Board of Directors.

B. Air Pollution Control Officer.

C. Advisory Council.

D. Hearing Board.

The powers and duties of these administrative agencies and officers are found in the basic enabling legislation, which is Chapter 2.5 of Division 20 of the Health and Safety Code of California.

IV. Applicability

A. Sources

The Regulation applies to certain source operations and specifically lists certain pollutants under each source; it will be digested in conformity with that arrangement, as follows:

1. Incineration and Salvage Operations

Defined as any source operation in which combustion is carried on for the principal purpose, or with the principal result, of oxidizing a waste material to reduce its bulk or facilitate disposal or both. /Regulation 2, sec. 1110.1/.

/a/ Sulfur Dioxide

Prohibited: emission of sulfur dioxide which results in ground level concentrations of sulfur dioxide at any given point of 1.5 ppm /vol./ -- parts per million by volume -- for three consecutive minutes. /Table I lists the maximum allowable sulfur dioxide ground-level limits and formulas for interpolation/. This Section does not apply to the ground-level concentrations occurring on the property from which the emission occurs, provided the property, from the emission point to the point of any such concentration, is controlled by the person responsible for such emission. /Regulation 2, sec. 3121/.

Prohibited: emission of gas containing sulfur dioxide in excess of 2000 ppm /vol./. All sampling of exhaust gases shall follow techniques prescribed and analysis of samples shall be made as specified. /Regulation 2, sec. 3122/.

Emissions exceeding limits of Section 3122 shall not constitute a violation of that section provided all following requirements are followed. /Regulation 2, sec. 3123/.

/1/ Emissions do not result in ground-level concentrations of sulfur dioxide exceeding limits established by Section 3121.

/2/ Person responsible for such emission shall have notified the control officer, prior to such emission, of his intent to operate under the provisions of Section 3123. Written notice to include information as to location of all significant emission points, location of monitoring stations and the nature of the source operations related to each such emission.

/3/ Person shall provide at least 3 recording sulfur dioxide monitoring stations located in the area surrounding the source.

/4/ Person shall provide at least one recording meteorological station equipped to record wind speed and direction.

/5/ Person shall provide necessary care and maintenance service so that the instruments function properly and adequately record sulfur dioxide exposures in the area.

/6/ Person to provide control officer a summary of data obtained from instruments during each calendar month; summary to contain, among other things, a detailed report of instrument performance and maintenance.

/7/ Records to be kept for at least 1 year and to be made available to control officer at his request.

/8/ Instruments to be examined at the time of each instrument maintenance check and in any case at intervals of no greater than every 7 days. At intervals no greater than 40 days, instruments to be examined to determine compliance with standards set up in Table. Any recorded violation of Section 3121 shall be reported to control officer within next normal working day after examinations.

/9/ When records indicate that violation of Section 3121 has occurred, person responsible for emission must furnish evidence that proper action has been taken to prevent recurrence, or a violation will have occurred and emission will be regulated. /Regulation 2, secs. 3123.1 through 3123.9/.

/b/ Visible Emissions

Prohibited: emissions which do not comply with limitations as follows:

Emission for more than 3 minutes in any one hour of air contaminants which, at the emission point, or within a reasonable distance are as dark or darker in shade as No. 2 Ringelmann, or of such opacity as to obscure an observer's view to a degree equal to or greater than No. 2 Ringelmann. /Regulation 2, secs. 3110, 3110.1, 3110.2/.

Prohibited: emission of particles in sufficient number to cause annoyance to any other person, which particles are sufficiently large as to be visible as individual particles at the emission point or of such size and nature as to be visible individually as incandescent particles. This Section applies only if particles fall on real property other than that of the person responsible for the emission. /Regulation 2, sec. 4111.2/.

/c/ Particulate Matter

Prohibited: emission of particulate matter in excess of a concentration of 0.20 grain per standard dry cubic foot of exhaust gas. /Regulation 2 secs. 4112.1, 4112.2/.

/d/ Hydrocarbons and Carbonyls

Prohibited: emission of exhaust gas containing a concentration of more than 50 ppm /vol./ of total hydrocarbons, or a concentration of more than 50 ppm /vol./ of total carbonyls. /Regulation 2. Sec. 4113/.

/e/ Exceptions

Emissions from any incinerator for which a purchase commitment was made prior to May 4, 1960, shall not be deemed to be in violation for a period equal to the reasonable economic life of the incinerator or January 1, 1968, whichever period is shorter, provided that such purchase commitment included a guarantee that such incinerator would meet the emission limitations of the Air Pollution Control District of the County of Los Angeles; and provided further, that the incinerator does comply with such emission limitations. /Regulation 2, sec. 4310/.

2. Heat Transfer Operations

/a/ Sulfur Dioxide

Prohibited: emissions in excess of standards set out at IV, A, 1, /a/, above. /Regulation 2, sec. 5110/.

/b/ Visible Emissions

Prohibited: emissions which do not comply with limitations set out in IV, A, 1 /b/. /Regulation 2, secs. 5111, 5111.1, 5111.2/.

Limitations do not apply to emissions resulting from soot-blowing on any oil-fired heat transfer operation, provided such emissions are not equal to or greater than No. 3 Ringelmann or an equivalent obscuration and provided further that the aggregate duration of such emissions during any 24 hour period does not exceed 6.0 minutes per billion B.T.U. gross heating value of oil-fuel burned during such 24 hours; and provided further, that such operation uses fuel at a rate not less than 140 million B.T.U. per hour. /Regulation 2, sec. 5111.3/.

/c/ Particulate Matter

Prohibited: emission of particulate matter in excess of 0.30 grain per standard dry cubic foot of exhaust gas. /Regulation 2, sec. 5112/.

/d/ Requirements

Every person responsible for an emission regulated by Section 5111.1 shall have and maintain means whereby the operator of the equipment shall be able at all times during the operation to know the appearance of the emission. This Section shall not apply to operations using fuel supplied to the burner piping in a gaseous state; nor to operations using gaseous fuel on an interruptible service contract from a public utility during the burning of alternate fuel. /Regulation 2, sec. 5210/.

3. General Combustion and General Operations

/a/ Sulfur Dioxide

Prohibited: emissions in excess of standards set out at IV, A, 1, /a/, above. /Regulation 2, sec. 6110/.

/b/ Visible Emissions

Prohibited: emissions which do not comply with limitations set out at IV, A, 1, /b/. /Regulation 2, secs. 6111, 6111.1, 6111.2/.

/c/ Particulate Matter

Prohibited: emissions of particulate matter from any emission point in a concentration in excess of 0.30 grain per standard dry cubic foot of exhaust gas volume. /Regulation 2, secs. 6112, 6112.1/.

Tables 2 and 3 list allowable rate of emission based on process weight rate and sections 6112.2 through 6112.4, and 6113 through 6113.2 relate to calculations, and limitations based on those tables.

/d/ Orchard Heaters

Prohibited: emission from any orchard heater of particulate carbonaceous matter at a rate in excess of 15 grains per minute. Section applies as follows:

/1/ To all orchard heaters purchased after March 31, 1961.

/2/ To all orchard heaters purchased before March 31, 1962, except as provided in Section 6220.

/3/ After July 4, 1965, to all orchard heaters whenever purchased. /Regulation 2, sec. 6114/.

4. Exceptions

Emissions from the following listed source operations are subject to Section 6200, to Sections 3211, 3213, 3214 and to all of the Regulations dealing with time for compliance /Division 7/ and to no other part of Regulation, provided, that emissions are minimized by the best modern practices, methods and concepts which may, from time to time be reasonably applied:

/a/ Electric furnaces during charging; and the doors of open hearth steel furnaces during charging. /Regulation 2, sec. 6210/.

/b/ Water-quenching of incandescent coke upon discharge from coke ovens, provided that exception shall apply only after reasonable effort has been made to minimize emissions by improving quality of quench water. /Regulation 2, sec. 6211/.

/c/ Transfer of molten metals or of molten metallurgical slags. /Regulation 2, Sec. 6212/.

/d/ Emissions from transfer ladles resulting from additions of solid materials for improving ferrous metal properties. /Regulation 2, sec. 6213/.

/e/ Coke ovens. /Regulation 2, sec. 6214/.

/f/ Emissions during a change to or a change from the use of gas supplied on an interruptible service contract by a public utility. /Regulation 2, sec. 6215/.

/g/ Operations which are performed solely for the movement of solid materials. /Regulation 2, sec. 6216/.

/h/ Material stock piles. /Regulation 2, sec. 6217/.

/i/ Blasting. /Regulation 2, sec. 6218/.

/j/ Cold-fired Hoffman-type brick-making kilns in existence on May 4, 1960. /Regulation 2, sec. 6219/.

/k/ Orchard heaters purchased before March 31, 1961, during emergency use to protect crops against frost damage. This exemption terminates July 4, 1965. /Regulation 2, sec. 6220/.

Regulation 2, does not apply to emission arising from source operations as follows:

/a/ Vehicles, as defined by Vehicle Code, or aircraft. /Regulation 2, sec. 1210/.

/b/ Internal combustion engines of less than 1500 cubic inches displacement; or any engine used solely as a standby source of motive power. /Regulation 2, sec. 1211/.

/c/ Source operations utilized exclusively in connection with any structure, which is designed and used exclusively as a dwelling for not more than two families. /Regulation 2, sec. 1212/.

/d/ Source operations or emission points or emissions where all of the following requirements are met:

/1/ Air contaminants are purposely emitted for the sole purpose of a specific beneficial use of a major portion of such air contaminants; and

/2/ Essentially all of the air contaminants are confined to the area in which such beneficial use is obtained; and

/3/ The quantity and nature of the air contaminants, and the proportion of air contaminant used in relation to amounts of other materials involved in the beneficial use of air contaminants, shall conform to accepted practice in the type of use employed. /Regulation 2, secs. 1213, 1213.1, 1213.2, 1213.3/.

/e/ Experimental operations where all of the following requirements are met:

/1/ The purpose of the operation and the need for the exception arises from investigation, experiment or research to advance the state of knowledge or to improve technique; and

/2/ The control officer has given express prior approval which shall include limitation of time; and

/3/ The health officer having jurisdiction has been consulted and has concurred in all terms of the exceptions. /Regulation 2, secs. 1214, 1214.1, 1214.2, 1214.3/.

/f/ Open outdoor fires meeting the requirements of Regulation 1, Section 3; fires used only for recreational purposes, residential heating, or occasional cooking of food for human beings, where such is accomplished in a fireplace or barbecue pit. /Regulation 2, sec. 1215/.

/g/ Laboratory equipment used exclusively for chemical or physical analysis or experimentation. /Regulation 2, sec. 1216/.

/h/ Equipment for inspection of metal products. /Regulation 2, sec. 1217/.

/i/ Portable brazing, soldering or welding equipment. /Regulation 2, sec. 1218/.

/j/ Comfort air conditioning or comfort ventilating systems which are not designed to remove air contaminants generated by or released from specific units of equipment. /Regulation 2, sec. 1219/.

/k/ Any emission point which is not an intended opening, and from which no significant quantities of air contaminants are emitted. /Regulation 2, sec. 1220/.

/l/ Smoke generators which are intentionally operated for purposes of training observers in observing the shade or opacity of emissions. /Regulation 2, sec. 1221/.

B. Specific Pollutants

1. Open Fires

Igniting or maintaining any open outdoor fire, prohibited, except:

/a/ Fires used for cooking food for humans and for recreational purposes.

/b/ Fires for disposal of household rubbish originating at one and two family dwellings, maintained by the occupant between 6 o'clock in the morning and sunset.

/c/ Fire permitted by public officer in performance of official duty if fire set or permission given for weed abatement, prevention of fire hazard, including the disposal of dangerous material where there is no safe alternate method of disposal, or in the instruction of public employees in fighting fires, and which fire is necessary.

/d/ Fires set to instruct industrial employees in methods of fighting fire, provided prior permission has been granted by public officer and by Air Pollution Control Officer.

/e/ Agricultural fire set by or permitted by Agricultural Commissioner of County, for the purpose of disease and pest prevention.

/f/ Safety flares for the combustion of waste gases.

/g/ Agricultural fires permitted by and official for the purpose of:

/1/ Control and disposal of agricultural wastes, but not including disposal of waste from glasshouse or greenhouse operations.

/2/ Stubble and brush control, but not roadside, railroad and utility rights-of-way weed control.

/3/ Improvement and control of watersheds. /This exception terminates on November 1, 1964, unless modified by Board of Directors/.

/h/ Fires set or permitted by public official in charge of flood control activities to dispose of vegetative growth in natural channels and water courses and flood control channels which fires are in the opinion of such official a necessary incident to prevent floods.

/i/ Except in emergency permits to be issued for fires permitted by clauses /c/, /d/, /e/, /g/, and /h/ of the Section, by the public official having jurisdiction only after consultation with Air Pollution Control Officer.

/j/ Any fire, if it can be demonstrated that nothing but carbon dioxide, nitrogen dioxide or water vapor is emitted under all operating conditions.

Nothing is intended to permit any practice which is in violation of statute, rule, ordinance or regulation. /Regulation 1, secs. 1, 3, 5/.

2. Visible Emissions

The prohibitions relative to visible emissions discussed at IV, A, 1, /b/, Regulation 2, Sections 3110, 3110.1, 3110.2, are subject to general limitations, as follows:

/a/ Where the presence of uncombined water is the only reason for the failure of an emission to meet the limitations of Section 3110, that section does not apply. /Regulation 2, sec. 3111/.

/b/ Section 3110 shall not apply to any emission on the basis of any observation of an air contaminant observed while such contaminant is inside a bona fide building. /Regulation 2, sec. 3112/.

/c/ If the person responsible for an emission can show that the emission meets all of the requirements listed below, then compliance with these limitations instead of those of Section 3110 can be used to show compliance of such emission with the limitations pertaining to visible emissions of this Regulation. The burden of showing compliance with all of the provisions of this section is upon the person seeking to come within its provisions.

/1/ The emission is from an opening of reasonably regular geometry, preceded by a containing device which has a minimum length six times the significant dimension of the emission point and within such minimum length; has a reasonably straight gas flow channel; has smooth interior surfaces; has area and geometry essentially constant and equal to the emission point; and does not cause a significant change in the gross direction of gas flow.

/2/ The emission does not contain significant amounts of materials which are vapors at stack temperature and particulate matter at ambient temperature.

/3/ The emission has a constant appearance which for the purposes of this Section shall mean that the emission has a clearly discernible predominant darkness of shade or degree of opacity, in the sense of Section 3110, and the aggregate of all of the periods during which the observed shade or opacity differs by 0.5 Ringelmann number or more from such predominant shade or opacity does not exceed 3 minutes in any consecutive 60 minutes.

/4/ During the time that all of the other requirements of this Section are met, the emission does not contain more grains of particulate matter per standard cubic foot other than allowed by formula specified.

/5/ The emission does not contain material other than the particulate matter determined in /4/ above, or uncombined water or both, that contributes significantly to the failure of the emission to meet the limitations of Section 3110.

/6/ Only emissions of that darkness of shade, degree of opacity or appearance of plume which have been observed pursuant to /3/ and /4/ above, and which emissions have been found to comply with the limitations of /4/ above are permitted by this section.

/7/ The control officer may require a repeated showing of compliance with this Section upon a significant change in operating conditions or upon observation of a significant change in the appearance of the plume. /Regulation 2, secs. 3113, 3113.1 through 3113.7/.

/d/ If the person responsible for an emission of SO3 or H2SO4 or both from an operation carried on for the purpose of making a material containing sulfur can show that such emission meets all applicable requirements, below, such emission shall not be subject to Section 3110.2. Tests to determine compliance shall follow the testing procedures outlined in this Regulation. Burden of showing compliance is upon person seeking to come within its provisions.

/1/ From operations using elemental sulfur or pyrites as the principal raw material, such emission shall have a concentration of SO3 or H2SO4 or both, expressed as 100 percent H2SO4, not exceeding 0.08 grain per standard dry cubic foot of exhaust gas volume.

/2/ From operations using as a principal raw material any sulfur-containing material other than elemental sulfur or pyrites, such emission shall have a concentration of SO3 or H2SO4, or both, expressed as 100 percent H2SO4, not exceeding 0.30 grain per standard dry cubic foot of exhaust gas volume.

/3/ Such emission shall not contain significant amounts of materials other than SO3, H2SO4, or uncombined water, which contribute significantly to the failure of the emission to meet the limitations of Section 3110.2. /Regulation 2, secs. 3114, 3114.1 through 3114.3/.

V. Enforcement

A. Time for Compliance

1. A reasonable time for compliance with this Regulation to be by control officer provided that persons responsible for any emission not in compliance submit reports to him at his request which are acceptable to him and which give the expected time for compliance, the intended method of compliance, and the progress toward compliance. /Regulation 2, sec. 7111/.

2. Time for compliance includes: time for engineering, time for procurement, time for fabrication, and time

for installation and adjustment. Control officer may require such periodic reports of progress toward compliance as may be necessary to show reasonable progress toward compliance. Failure at any phase to make reasonable progress toward completion of such installations as are required for final compliance deemed to be an unreasonable delay in compliance. /Regulation 2, Sec. 7113/.

B. Variances

1. Upset Conditions, Breakdown or Scheduled Maintenance

Emissions exceeding established limits as a direct result of upset conditions in or breakdown of any air pollution control equipment or related operating equipment, or as a direct result of the shutdown of such equipment for scheduled maintenance, shall not be deemed to be in violation of the rules establishing such limits, so long as the following conditions are met:

/a/ Occurrence has been reported to offices of District as soon as reasonably possible; for scheduled maintenance, such report shall be submitted at least 24 hours prior to shutdown, and for upset conditions or breakdown, report shall in any case be made within 4 hours of occurrence.

/b/ Scheduled maintenance of air pollution equipment not subject to these provisions, except in cases where the maximum reasonable effort, including off-shift labor were required, has been made to accomplish such maintenance during periods of non-operation of any related source operations.

/c/ The person responsible for such emission shall, with all practicable speed, initiate and complete appropriate reasonable action to correct the conditions causing such emissions to exceed the limits; to reduce the frequency of occurrence of such conditions; to minimize the amount by which the limits are exceeded; and to reduce the length of time for which the limits are exceeded; and shall, upon request of the control officer, submit a full report of the occurrence, including a statement of all known causes and of the scheduling and nature of the actions to be taken pursuant to this Section. /Regulation 2, secs. 3212, 3212.1 through 3212.3/.

C. Procedure

Procedures to be followed are specified in the basic enabling legislation, which is Chapter 2.5 of Division 20 of the Health and Safety Code of California.

D. Abatement

Provisions for the institution of abatement proceedings are specified in the basic enabling legislation which is Chapter 2.5 of Division 20 of the Health and Safety Code of California.

E. Penalties

None.

VI. Preventive Programs

A. Sampling

Person responsible for emission of air contaminants from any emission point for which emission limits are established by this Regulation, shall upon request of control officer, provided, in connection with such emission point and related source operations, sampling and testing facilities, as may be necessary for the proper determination of the nature, extent, quantity and degree of air contaminants which are or may be emitted as a result of such operation. Facility may be permanent or temporary at discretion of person responsible; they shall be suitable for determinations consistent with the emission limits; and they shall comply with all applicable laws and regulations concerning safe construction or safe practices in connection with such facilities. /Regulation 2, sec. 3210/.

Methods of calculation and sampling procedures are specified in Sections 8100 through 8715. Analytical procedures are specified in Sections 9110 through 9519.

B. Registration

Except as excluded in IV, B, 4, above, each person responsible for emission of air contaminants shall register with the control officer: his business name, address, name of responsible managing officer, description of business entity, nature of the business. He shall thereafter provide any information regarding such emission as may be required. He shall maintain such registration in current status by notifying the control officer of significant changes in any item of information furnished. Persons may be served notice of hearing at address contained in the registration.

AIR POLLUTION CONTROL DISTRICT
of
LOS ANGELES COUNTY, CALIF.

I. Regulations

Rules and Regulations, as amended, of the Air Pollution Control District of Los Angeles County, promulgated pursuant to Chapter 2, Division 20, of the Health and Safety Code of California.

II. General Statement

Regulations control the discharge of air contaminants, require permits for the construction, alteration, replacement or operation of sources of air contaminants, and regulate the use of orchard or citrus grove heaters. Provision is made for the declaration of an emergency so as to prevent toxic concentrations of air contaminants. Definition of person includes any state or local governmental agency or public district or officer or employee thereof.

III. Administrative Organization

A. Air Pollution Control Board composed of the County Board of Supervisors.

B. Air Pollution Control Officer appointed by the Control Board. The powers and duties of the Control Board and the Officer are specified in Chapter 2, Division 20, of the Health and Safety Code of California.

IV. Applicability

A. Sources

1. Scavenger plants

Plant recovering pollutants which would otherwise be emitted may be permitted to operate where the total emission of pollutants is substantially less with the plant in operation than when closed even though the concentration exceeds that permitted by IV B 3. /Rule 53.1/.

2. Storage of Petroleum Products

Prohibited: Storage in any stationary tank reservoir or other container of more than 40,000 gallons capacity gasoline or any petroleum distillate having vapor pressure of 1.5 pounds per square inch absolute or greater under actual storage conditions, unless the tank is a pressure tank maintaining working pressures sufficient at all times to prevent hydrocarbon vapor or gas loss to the atmosphere, or is designed and equipped with properly installed and working:

/a/ Floating roof, equipped with closure seal, or

/b/ Vapor recovery system

/c/ Other equipment of equal efficiency approved by the Control Officer. /Rule 56/.

3. Open fires

Prohibited: Burning combustible refuse in any open outdoor fire except:

/a/ When fire is set in performance of an official duty of any public officer and the fire is necessary:

/1/ For prevention of a fire hazard which cannot be abated by other means, or

/2/ For the instruction of public employees in firefighting methods.

/b/ Fire set pursuant to permit on property used for industrial purposes for instruction of employees in firefighting methods.

/c/ Fire set in course of agricultural operation in growing crops, raising fowl or animals.

These exceptions shall not be effective on any day on which the Control Officer determines that the inversion base at 4:00 A.M. P.S.T. will be lower than 1500 feet above mean sea level, and the maximum mixing height will not be above 3500, and the average wind speed between 6:00 A.M. and 12:00 noon P.S.T., will not exceed 5 miles per hour. /Rule 57/.

4. Incinerator Burning

Prohibited: Burning combustible refuse in any incinerator, except in a multiple chamber incinerator approved by the Control Officer. /Rule 58/.

5. Commercial and Industrial Incinerator Burning

Prohibited: Burning combustible refuse in any incinerator, except a multiple chamber or in equipment approved by the Control Officer. Provisions of Rule not applicable to incinerator used in connection with structure designed and used exclusively as dwelling for not more than 4 families. /Rule 58.1/.

6. Oil-Effluent Separator

Prohibited: Use of any compartment of any single or multiple compartment oil-effluent water separator which receives effluent water containing 200 gallons or more a day of any petroleum product or mixture of petroleum products from any equipment processing, refining, treating, storing or handling kerosine or other product of equal or greater volatility than kerosine, unless the equipment is equipped with:

/a/ A solid cover with all openings sealed and totally enclosing the liquid contents,

/b/ A floating roof, equipped with a closure seal,

/c/ A vapor recovery system,

/d/ Other equipment of equal efficiency approved by the Control Officer.

This Rule does not apply to any oil-effluent water separator used exclusively in the production of crude oil. /Rule 59/.

7. Gasoline Loading into Tank Trucks and Trailers

Prohibited: Loading gasoline into any tank truck or trailer from any loading facility unless it is equipped with a properly installed and working vapor collection and disposal system or its equivalent. Vapor disposal portion of the system to consist of: a vapor-liquid absorber system with a minimum recovery efficiency of 90 percent by weight of all hydrocarbon vapors and gases, or, a variable vapor space tank, compressor and fuel gas system of sufficient capacity to receive all hydrocarbon vapors and gases displaced from the tank trucks and trailers being loaded, or other equipment of equal efficiency approved by the Control Officer. Rule does not apply to loading into tank trucks and trailers from any loading facility from which not more than 20,000 gallons are loaded in any one day. /Rule 61/.

8. Sulfur Content in Fuels

Prohibited: Burning between April 15 and November 15 any gaseous fuel containing sulfur compounds in excess of 50 grains per 100 cubic feet of gaseous fuel calculated as hydrogen sulfide, or any liquid fuel or solid fuel having a sulfur content in excess of 0.5 percent by weight. Rule does not apply to:

/a/ The burning of sulfur, hydrogen sulfide or other sulfur compounds in the manufacturing of sulfur compounds.

/b/ Incinerating of waste gases, provided the gross heating value of such gases is less than 300 B.T.U. per cubic foot and the fuel used does not contain sulfur or compounds in excess of stated amount.

/c/ Use of solid fuels in any metallurgical process.

/d/ Use of fuel where gaseous products of combustion are used as raw materials for other processes.

/e/ Use of liquid or solid fuel to propel or test any vehicle, aircraft, missile, locomotive, boat or ship.

/f/ Use of liquid fuel when gaseous fuel is not available due to accident, act of God, act of war, act of public enemy or failure of the supplies. /Rule 62/.

9. Gasoline Specifications

Prohibited: Sale or supplying for use for motor vehicles of gasoline having a Bromine No. of 30 as determined by A.S.T.M. method D 1159-57T, modified by omission of mercuric chloride catalyst. Gasoline means any petroleum distillate having a Reid vapor pressure of more than 4 pounds. /Rule 63/.

10. Reduction of Animal Matter

Prohibited: Operation of any article, machine, equipment or other contrivance for the reduction of animal matter unless all gases, vapors and gas-cut rained effluents are:

/a/ Incinerated at temperatures of not less than 1200 degrees F. for not less than 0.3 seconds, or

/b/ Processed in a manner determined by the Control Officer to be equally efficient.

Rule does not apply to any article, machine, equipment or other contrivance used exclusively for the processing of food for human consumption. /Rule 64/.

11. Orchard or Citrus Grove Heaters

Regulation VI /Rules 100 through 103, 105 through 110, 120, 130/, requires permits for the use of heaters, provides exceptions, requires the payment of fees and specifically prohibits certain types of heaters.

B. Specific Pollutants

1. Air Contaminants Generally

/a/ Prohibited: Discharge from any single source of emission any air contaminant for period or periods aggregating 3 minutes in one hour, which is:

/1/ As dark as or darker in shade than No. 2 Ringelmann, or

/2/ Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in /a/, above. /Rule 50/.

/b/ Exceptions:

/1/ Smoke from fires set in performance of official duty of public officer which are necessary for prevention of a fire hazard which cannot otherwise be abated, or for the instruction of public employees in methods of firefighting.

/2/ Smoke from fires permitted on industrial property for purpose of instruction of employees in firefighting methods.

/3/ Agricultural operations or equipment used in the growing of crops, or raising of fowl or animals.

/4/ Use of an orchard or citrus grove heater which does not produce unconsumed solid carbonaceous matter at a rate in excess of one gram per minute. /Rule 55/.

C. Nuisance

1. Prohibited: Discharge from any source such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property. /Rule 51/.

2. Particulate Matter

Prohibited: Discharge from any source particulate matter in excess of 0.4 grams per cubic foot of gas at standard conditions, except as provided in IV B 3 and 4. /Rule 52/.

3. Specific Contaminants

Prohibited: Discharge from any single source of emission contaminants, as follows, exceeding in concentration at the point of discharge:

/a/ Sulfur compounds calculated as sulfur dioxide: 0.2 percent, by volume.

/b/ Combustion contaminants: 0.3 gram per cubic foot of gas calculated to 12 percent of carbon dioxide at standard conditions. In measuring the combustion contaminants from incinerators used to dispose of combustible refuse by burning, the carbon dioxide produced by combustion of any liquid or gaseous fuels shall be excluded from the calculation to 12 percent of carbon dioxide. /Rule 53/.

4. Dust and fumes

Prohibited: Discharge in any one hour from any source dust or fumes in total quantities in excess of amounts shown in the attached Table.

V. Enforcement

A. Unlawful Acts

Construction, erection, installation, or use of any article, machine, equipment or other contrivance the use of which without resulting in a reduction in the total release of air contaminants, reduces or conceals an emission which would otherwise constitute a violation of Chapter 2, Division 20 of the Health and Safety Code or of the Rules and Regulations. This Rule not applicable to violations of the general nuisance provisions of the Code or these regulations. /Rule 60/.

B. Procedure

Regulation V /secs. 75 through 80, 82 through 91, 94 and 95/ prescribe the procedures to be followed before the Hearing Board, consisting of 3 members appointed by the Control Board. These Rules provide for the filing and contents of petitions, appeals from denials of permits, the taking of evidence, granting of variances and the rendition of decisions.

C. Penalties and Injunction

Chapter 2, Division 20 of the Health and Safety Code provides that any violation of the Code or the Rules and Regulations is enjoinable and is a misdemeanor.

VI. Preventive Programs

A. Permits

Regulation II /Rules 10 through 14, 17 through 25/ requires that permits be obtained from the Control Officer for the construction, erection, alteration or replacement of any article, machine, equipment or other contrivance which may cause the issuance of air contaminants, or the use of which may eliminate, reduce or control air contamination. Operating permits are also required as well as permits to sell or rent incinerators which may be used to dispose of combustible refuse in connection with any structure designed and used exclusively as a dwelling for not more than 4 families.

The Regulation specifies the grounds for cancellation or extension of permits and requires that permittees maintain sampling and testing facilities. Procedures are outlined for appeal from adverse actions of the Control Officer on the application for permit.

Exemptions from the requirement of permits are also listed.

Regulation III /Rules 40, 42 through 44/ provides for the fees to be paid for the various kinds of permits granted and includes fee schedules for specific machines or equipment.

B. Emergencies

Regulation VII /Rules 150 through 161, 163, 164/ is designed to prevent excessive buildup of air contaminants and to avoid catastrophies caused by toxic concentrations of air contaminants. The Regulation provides a plan to prevent these concentrations and to provide for adequate actions to protect the public health in the event toxic concentrations occur.

1. This Regulation will be applicable during any "alert" stage, notwithstanding any other provisions of the Rules and Regulation. /Rule 150/.

2. Control Officer has duty to maintain at least 6 permanent atmospheric sampling stations and must establish procedures whereby adequate samplings and analysis of air contaminants will be taken at each station. The Control Officer must make daily summaries of the readings which are to be filed and are public records. /Rules 151, 152, 153/.

3. Control Officer is to inform the public of the ways in which air pollution can be reduced and is to request voluntary cooperation from all persons in all activities which contribute to air pollution. Civic groups are to be encouraged to undertake campaigns of education and voluntary reduction in their communities; public officials are to be urged to take steps to reduce air contamination; employers are to be requested to establish car pools; users of autos are to be urged to keep motors in good condition, and industrial, commercial and business establishments which emit hydrocarbons should critically study their operations from the standpoint of reduction of air pollution. /Rule 154/.

/a/ Where Control Officer finds that any industrial, commercial or business establishment or activity emits hydrocarbons or other contaminants, he may give written notice to submit plans for immediate shutdown or curtailment in case of an air pollution emergency. The plans are to include, vehicles operated in the business activities of the establishment, a list of all sources of hydrocarbons and other contaminants and a statement of the minimum time and recommended time to effect a complete shutdown of each source in the event of an air pollution emergency.

/b/ The Control Officer must prepare plans for action to be taken in respect to a first or second alert.

/c/ The object of such programs is to result in a diminution of air contaminants which brought about the second alert and to prevent any increase, in order to protect the public health. It is also the objective to curtail the operations of industrial, business, commercial or other activities, but without undue interference with the operations of public utilities and other activities the conduct of which is essential to the health and welfare of the community.

/d/ Control Officer to prepare plans for action with respect to industry, business, transportation, hospitals, schools and other appropriate public and private institutions to accomplish the purposes of the second alert. /Rule 154.1/.

4. Control Officer shall declare the appropriate alert whenever the concentration of any air pollution contaminant has been verified to have reached the standards set in Rule 156. /Rule 155/.

5. Control Officer, following the declaration of the appropriate alert, shall notify the county sheriff who shall broadcast the declaration of the alert to appropriate police and public officials. /Rule 155.1/.

6. Control Officer to install and maintain in continuous operation a radio communication system for the purpose of broadcasting the declaration of alerts and information and instructions for carrying out this Regulation. Certain plants are required to install radio receiving equipment capable of receiving broadcasts of the Control Officer. /Rule 155.2/.

7. Alert stages for toxic air pollutants. /In parts per million of air/.

	First Alert	Second Alert	Third Alert
Carbon Monoxide	100	200	300
Nitrogen Oxides	3	5	10
Sulfur Oxides	3	5	10
Ozone	0.5	1.0	1.5

First Alert: Close approach to maximum allowable concentration for population at large. Still safe but approaching a point where preventive action is required.

Second Alert: Air contamination level at which a health menace exists in a preliminary stage.

Third Alert: Air contamination level at which a dangerous health menace exists. /Rule 156/.

Actions to be taken during first, second and third alerts are enumerated. /Rules 157, 158, 159/.

8. Control Officer shall declare the termination of the appropriate alert whenever the concentration of air contaminant causing the alert has been verified to have fallen below the standards in Rule 156, and the

available meteorological and scientific data indicate that the concentration will not increase again so as to reach the standards. Control Officer to communicate declaration of termination as in Rule 155.1. /Rule 160/.

9. When an alert has been called the Control Officer, the Sheriff, their deputies and all other peace officers shall enforce the appropriate provisions, this Regulation and all orders of the Air Pollution Control Board or the Control Officer. /Rule 161/.

10. Control Board shall appoint a Scientific Committee composed of licensed physicians, medical scientists, biologists, chemists, engineers or meteorologists, experienced in air pollution work. Control Officer and County Counsel to serve on Committee, ex-officio. Committee is to study and recommend most suitable methods for measurement of air contaminants and any changes in concentrations set forth in Rule 156; to serve in a consultant advisory capacity to the Control Officer concerning any air pollution health problem which may arise. /Rule 163/.

11. Control Board shall appoint an Emergency Action Committee, composed of ten members: two air pollution experts, two licensed physicians, two industrialists, two lawyers and two representatives of the public at large. County Health Officer, Sheriff and County Counsel shall serve on the Committee, ex-officio. Committee is to meet with the Control Officer and to advise him as to the appropriate action to be taken when the concentration of any contaminant set forth in Rule 156 has been verified to be approaching the standards set forth in Rule 156. /Rule 164/.

Los Angeles County, Calif. (Cont.)

TABLE

Process Wt/hr /lbs./	Maximum Weight Disch/hr /lbs./
50	.24
100	.46
150	.66
200	.852
250	1.03
300	1.20
350	1.35
400	1.50
450	1.63
500	1.77
550	1.89
600	2.01
650	2.12
700	2.24
750	2.34
800	2.43
850	2.53
900	2.62
950	2.72
1000	2.80
1100	2.97
1200	3.12
1300	3.26
1400	3.40
1500	3.54
1600	3.66
1700	3.79
1800	3.91
1900	4.03
2000	4.14
2100	4.24
2200	4.34
2300	4.44
2400	4.55
2500	4.64
2600	4.74
2700	4.84
2800	4.92
2900	5.02
3000	5.10
3100	5.18
3200	5.27
3300	5.36
3400	5.44
3500	5.52
3600	5.61
3700	5.69
3800	5.77
3900	5.85
4000	5.93
4100	6.01
4200	6.08
4300	6.15
4400	6.22
4500	6.30
4600	6.37
4700	6.45
4800	6.52
4900	6.60
5000	6.67
5500	7.03
6000	7.37
6500	7.71
7000	8.05
7500	8.39
8000	8.71
8500	9.03
9000	9.36
9500	9.67
10000	10.0
11000	10.63
12000	11.28
13000	11.89
14000	12.50
15000	13.13
16000	13.74
17000	14.36
18000	14.97
19000	15.58
20000	16.19
30000	22.22
40000	28.3
50000	34.3
60000, or more	40.0

ORANGE COUNTY, CAL.

I. Area of Jurisdiction; Regulation

Air Pollution Control District of Orange County; Rules and Regulations approved October 25, 1955; promulgated pursuant to Chapter 2, Division 20 of the Health and Safety Code of California.

II. General Statement

Regulation regulates discharge of air contaminants, smoke, fumes, dust and particulate matter; controls petroleum storage, incineration, open fires, orchard heaters and requires permits and the payment of fees. Procedures before hearing board are specified.

III. Administrative Organization

A. Air Pollution Control Officer, has duty to enforce provisions of state law and rules and regulations promulgated by Air Pollution Control Board. Control Officer has power to receive and act upon applications for permits as specified in VI. /Rules 5, 10 through 19/.

B. Air Pollution Control Board has power to promulgate rules and regulations pursuant to authority of state law.

C. Hearing Board has authority to hear appeals from actions of Control Officer. /Rules 20 through 22, 51 through 66/.

IV. Applicability

A. Sources

1. Storage of petroleum products

Storage in any stationary tank, reservoir or other container of more than 40,000 gallons capacity of any gasoline or petroleum distillate having a vapor pressure of 1.5 pounds per square inch absolute or greater under alcohol storage conditions prohibited, unless, tank, reservoir or container is a pressure tank maintaining working pressures sufficient at all times to prevent hydrocarbon vapor or gas loss to the atmosphere, or is designed and equipped to prevent hydrocarbon vapor or gas loss to the atmosphere by having:

/a/ a floating roof, or

/b/ a vapor recovery system, consisting of a vapor gathering system and a vapor disposal system capable of processing hydrocarbon vapors and gases so as to prevent any emission to the atmosphere, with all breathing vents to atmosphere set at least 0.5 ounce per square inch greater than the setting of valves opening into the system and with all tank gauging and sampling devices gastight.

/c/ other equipment of equal efficiency approved by Control Officer. /Rule 45/.

2. Incinerator Burning

/a/ After November 1, 1955, burning combustible refuse in any device other than a multiple chamber incinerator prohibited when following conditions are determined and proclaimed by Control Officer to exist:

/1/ The inversion base at 7:00 A.M. P.S.T. will be lower than 1500 feet, and

/2/ Such inversion will not break or the maximum mixing height will not raise above 3500 feet, and

/3/ The average surface wind speeds between 6:00 A.M. and 12:00 Noon P.S.T. will not exceed 5 miles per hour.

/b/ Under all other weather conditions the use of incinerators other than multiple chamber incinerators shall be restricted to between 6:00 A.M. and 10:00 A.M. and between 5:00 P.M. and 8:00 P.M. or at such other hours as established by the Board. /Rule 46/.

3. Open Fires

/a/ After November 1, 1955, burning refuse in open outdoor fire prohibited except during hours enumerated in Rule 46, unless:

/1/ Fire is set or permission for fire given in performance of official duty of a public officer for weed abatement, elimination and/or prevention of a fire hazard, the instruction of public employees in firefighting, or

/2/ Fire is part of agricultural operation in growing crops or raising fowl, animals or bees.

/b/ When Control Officer determines that climatic conditions, as enumerated in Rule 46, exist, all open fires prohibited. /Rule 47/.

4. Orchard Heaters

Regulation VI, /Rules 70 through 88/ defines and classifies orchard heaters and requires permits for the construction, placement, maintenance, alteration, use or operation of more than 5 orchard heaters to be obtained from Control Officer. The sale of heaters other than those classified is prohibited; heating oil dealers are required to obtain a permit and to maintain records of delivery of fuel oil; heating oil specifications are enumerated, and provisions are listed for the suspension of permits.

B. Specific Pollutants

1. Air contaminants

Discharge into atmosphere from any single source of emission any air contaminant, prohibited for period or periods aggregating more than 3 minutes in any one hour, which is:

/a/ As dark in shade or darker than that designated as No. 2 Ringelmann or

/b/ Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in /a/ above. /Rule 40/.

2. Particulate matter

Discharge into atmosphere from any source of particulate matter in excess of 0.4 grains per cubic foot prohibited, except as provided in Rules 43 and 44. /Rule 42/.

3. Specific contaminants

Discharge into atmosphere prohibited of following contaminants, in any state or combination, exceeding in concentration at the point of discharge:

/a/ Sulphur compounds /calculated as SO2/ 0.2 percent by volume.

/b/ Solid products of combustion 0.4 grains per cubic foot of gas calculated to 12 percent carbon dioxide. /Rule 43/.

4. Dust and fumes

Discharge in one hour from any source whatsoever of dust or fumes in total quantities in excess of the amount shown in the table:

Orange County, Cal. (Cont.)

TABLE

Process Wt/hr /lbs./	Maximum Weight Disch/hr /lbs./	Process Wt/hr /lbs./	Maximum Weight Disch/hr /lbs./
50	.24	3300	5.36
100	.46	3400	5.44
150	.46	3500	5.52
200	.852	3600	5.61
250	1.03	3700	5.69
300	1.20	3800	5.77
350	1.35	3900	5.85
400	1.50	4000	5.93
450	1.63	4100	6.01
500	1.77	4200	6.08
550	1.89	4300	6.15
600	2.01	4400	6.22
650	2.12	4500	6.30
700	2.24	4600	6.37
750	2.34	4700	6.45
800	2.43	4800	6.52
850	2.53	4900	6.60
900	2.62	5000	6.67
950	2.72	5500	7.03
1000	2.80	6000	7.37
1100	2.97	6500	7.71
1200	3.12	7000	8.05
1300	3.26	7500	8.39
1400	3.40	8000	8.71
1500	3.54	8500	9.03
1600	3.66	9000	9.36
1700	3.79	9500	9.67
1800	3.91	10000	10.0
1900	4.03	11000	10.63
2000	4.14	12000	11.28
2100	4.24	13000	11.89
2200	4.34	14000	12.50
2300	4.44	15000	13.13
2400	4.55	16000	13.74
2500	4.64	17000	14.36
2600	4.74	18000	14.97
2700	4.84	19000	15.58
2800	4.92	20000	16.19
2900	5.02	30000	22.22
3000	5.10	40000	28.3
3100	5.18	50000	34.3
3200	5.27	60000, or more	40.0

V. Enforcement

A. Analysis

If Control Officer finds that an analysis of emission is necessary to determine the extent and amount of pollutants being discharged, he may order the collection of samples and analysis made by personnel of the Control District. The time required to collect samples, make the analysis and prepare the necessary reports is charged against the owner and operator of premises in a reasonable sum to be determined by the Control Officer, but sum cannot exceed the actual cost of such work. /Rule 31/.

B. Unlawful Acts

1. Obstruction, denial or hampering Control Officer in his efforts to enter premises to enforce or administer rules is a misdemeanor. /Rule 6/.

2. Burning of any open fire /except dry wood, coke and briquets/ and the burning of any rubber, rubber tires or any substance containing rubber for the purpose of or in connection with frost protection is prohibited. /Rule 87/.

C. Procedure

1. Regulation V /Rules 50 through 66/ applies to all hearings before the Hearing Board. It specifies the method of filing of petitions and their form; it provides for the service of petition and answers; it specifies the place of hearing and provides for the mailing of notices; it indicates the rights of parties during the hearing, the kind of evidence which may be adduced, the obtaining of affidavits, and for decisions, official notice to be taken by the Board, continuances, emergencies and effective date of the decision of the Board.

D. Violations

Provisions of Health and Safety Code of California are cited to show that violations of the statute or of any order, rule or regulation of the Air Pollution Control Board may be enjoined in a civil action brought in the name of the people of the state. Every person violating any order, rule or regulation of the Air Pollution Control District is guilty of a misdemeanor. Every day during any portion of which a violation occurs is a separate offense. /Rule 7/.

VI. Preventive Programs

A. Permits

Regulation II /Rules 10 through 22/ deals with permits. These rules provide:

1. That the building, erection, alteration or replacement of any article, machine, equipment or other contrivance, the use of which may cause the issuance of air contaminants, except those described in section 24265 of the Health and Safety Code, as follows:

/a/ any vehicle defined in the vehicle code,

/b/ any structure designed and used exclusively as a dwelling for not more than 4 families,

/c/ an incinerator used exclusively in connection with such a dwelling,

/d/ non-commercial barbecue equipment,

/e/ agricultural operations and certain equipment,

/f/ repairs and maintenance not involving structural changes to any equipment for which a permit has been granted,

must first be authorized by the Control Officer. No such article, machine, equipment or other contrivance can be operated without a permit issued from the Control Officer. /Rule 10/.

2. The permits are not transferable. /Rule 11/.

3. Applications for permits are to be filed with the Control Officer who shall notify applicant of his approval, conditional approval or denial. Written notice of approval is the same as granting of permit. /Rules 11 through 14/.

4. Application cannot be approved or permit granted unless it is shown that every article, machine equipment or other contrivance will operate without emitting of air contaminants. /Rule 15/.

5. Control Officer may grant approvals conditioned upon bringing application within standards of Rule 15. Denials must be accompanied by written reasons therefor, and applicant may file further application when he has satisfactorily remedied the cause of the specified

objections. Before acting on application, Control Officer may require applicant to furnish further information. /Rules 16 through 18/.

6. Within 10 days of written notice of denial or of conditional approval, applicant may appeal to Hearing Board. Within 30 days after request for public hearing, Hearing Board shall hold hearing with 10 days notice to applicant, Control Officer and other persons. After hearing, Board may:

/a/ Deny application

/b/ Approve application

/c/ Approve application subject to specified conditions. /Rules 20 through 22/.

7. Fees are specified. /Rule 30/.

AIR POLLUTION CONTROL DISTRICT
of
RIVERSIDE COUNTY, CAL.

I. Regulations

Rules and Regulations of the Riverside County Air Pollution Control District, effective February 1, 1959, with certain exceptions.

II. General Statement

Regulations require permits for the operation, use, erection, alteration or replacement of any article which may cause the issuance of air contaminants, prohibits pollution from specified sources and by enumerated contaminants, regulates orchard, field crop and citrus grove heaters, specifies rules of procedure, and requires the payment of fees. Definition of person includes a state or local governmental agency or public district or any officer or employee thereof. Regulations promulgated pursuant to powers given to District in Chapter 2 of Division 20 of the Health and Safety Code of California.

III. Administrative Organization

A. Air Pollution Control Board

B. Air Pollution Control Officer

IV. Applicability

A. Sources

See IV B, C, and VI.

B. Specific Pollutants

1. Ringelmann Chart

Prohibited: discharge into the atmosphere from any single source of emission any air contaminant for a period or periods aggregating more than 3 minutes in any one hour, which is:

/a/ As dark or darker in shade than No. 2 Ringelmann, or

/b/ Of such opacity as to obscure an observer's view to a degree equal to or greater than No. 2 Ringelmann. /Rule 50/.

2. Particulate Matter

Prohibited: discharge from any single source particulate matter in excess of 0.4 grain per cubic foot of gas at standard conditions over a period of one hour. This rule effective January 1, 1962. /Rule 52/.

3. Specific Air Contaminants

Prohibited: discharge from any single source, any one or more of the following contaminants in any state or combination exceeding in concentration at the point of discharge:

/a/ Sulphur compounds calculated as sulphur dioxide: 0.2 percent by volume.

/b/ Combustion contaminants: 0.3 grain per cubic foot of gas calculated to 12 percent of carbon dioxide at standard conditions. In measuring combustion contaminants from incinerators used to dispose of combustible refuse by burning, the carbon dioxide produced by combustion of any liquid or gaseous fuels shall be excluded from the calculation of 12 percent of carbon dioxide.

/c/ Fluorine compounds: emissions shall be controlled to the maximum degree technically feasible in respect to the process or operation causing such emission, but no emission shall be permissible which may cause injury to the property of others. /Rule 53/.

This Rule effective January 1, 1962. /Rule 53/.

4. Dust and Fumes

Prohibited: discharge in any one hour from any specific process or other source, dust or fumes in total quantities in excess as per the attached table. This Rule effective January 1, 1962. /Rule 54/.

5. Exceptions

Rules 50, 52, 53 and 54 do not apply to:

/a/ A fire set by or permitted by any public officer if set in the performance of an official duty, and if fire is necessary:

/1/ For the purpose of prevention of a fire hazard which cannot be abated by any other means, or

/2/ The instruction of public employees in the methods of fire fighting.

/b/ Fire set pursuant to permit on property used for industrial purposes for the purpose of instruction of employees in methods of fighting fire.

/c/ Agricultural operations in the growing of crops or raising of fowl or animals, or

/d/ Use of an orchard, field crop, or citrus grove heater which does not produce unconsumed, solid carbonaceous matter at a rate in excess of one gram per minute.

/e/ Use of other equipment in agricultural operations in the growing of crops, raising of fowl or other animals. /Rule 55/.

6. Inoperative Rules

Rule 57, Open Fires, and Rule 58, Incinerator Burning, are inoperative until such date as may be fixed by the Board after due notice and public hearing.

C. Volatility

1. Gasoline Loading

Prohibited: loading gasoline into any tank truck or trailer from loading facility unless it is equipped with a vapor collection and disposal system.

When loading through the hatches of tank truck or trailer with loading arm equipped with a vapor collecting adaptor, a pneumatic hydraulic or other mechanical means must be provided to force a vapor-tight seal between the adaptor and the hatch. It must also provide means to prevent liquid gasoline drainage from loading device when removed from the hatch. When loading other than through hatch, all loading and vapor lines must be equipped with fittings which make vapor-tight connections and which close automatically when disconnected.

Vapor disposal portion of system must consist of either:

/a/ A vapor-liquid absorber system with minimum recovery efficiency of 90 percent by weight of all hydrocarbon vapors and gases entering the system, or

/b/ A variable vapor space tank, compressor, and fuel gas system of sufficient capacity to receive all hydrocarbon vapors and gases displaced from tank trucks and trailers being loaded, or

/c/ Other equipment of equal efficiency, approved by the Air Pollution Control Officer.

This Rule not applicable to loading gasoline into tank trucks and trailers from loading facility from which not more than 20,000 gallons of gasoline are loaded in any one day. /Rule 59/.

2. Oil-Effluent Separator

Prohibited: use of any compartment or any single or multiple compartment oil-effluent water separator which receives effluent water containing 200 gallons or more a day of any petroleum products from equipment processing refining, treating, storing or handling kerosene or other petroleum product of equal or greater volatility than kerosene, unless compartment is equipped with vapor loss control devices, constructed so as to prevent any emission of hydrocarbon vapors, as follows:

/a/ A cover totally enclosing the liquid contents, or

/b/ A floating roof, consisting of a pontoon type, or double deck type roof resting on the surface of the liquid contents and equipped with a closure seal or seals to close the space between the roof edge and container wall, or

/c/ A vapor recovery system consisting of a vapor gathering system capable of collecting hydrocarbon vapors and gases discharged, and a vapor disposal system capable of processing such hydrocarbon vapors, or

/d/ Other equipment of equal efficiency, approved by the Air Pollution Control Officer. /Rule 60/.

3. Storage of Petroleum Products

Prohibited: storage in any stationary tank, reservoir, or other container of more than 40,000 gallons capacity, any gasoline or any petroleum distillate having a vapor pressure of 1.5 lbs. per square inch, absolute or greater under actual storage conditions, unless the tank, reservoir or other container is a pressure tank maintaining working pressures sufficient at all times to prevent hydrocarbon vapor or gas loss, or is equipped and designed to prevent hydrocarbon vapor or gas loss by being equipped with one of the following:

/a/ A floating roof, consisting of a pontoon type or double deck type roof, resting on the surface of the liquid contents and equipped with a closure seal or seals to close the space between the roof edge and tank wall, or

/b/ A vapor recovery system consisting of a vapor gathering system capable of collecting the hydrocarbon vapors and gases discharged and a vapor disposal system capable of processing such hydrocarbon vapors and gases so as to prevent any emission, with all breathing vents set at least 0.5 ounce per square inch greater than the setting of valves opening into the vapor disposal system and with all tank gauging and sampling devices gas-tight.

/c/ Other equipment of equal efficiency, approved by the Air Pollution Control Officer.

This Rule effective January 1, 1962. /Rule 61/.

V. Enforcement

The provisions of Chapter 2, Division 20 of the Health and Safety Code of California should be consulted for the specific methods of enforcement available to the Board. The following are matters found in the Rules and Regulations.

A. Nuisance

Discharge from any source such quantities of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any persons, or the public, or which causes or has a natural tendency to cause injury or damage to business or property. /Rule 51/.

B. Procedure

Regulation VI, Rules 95 through 113, applies to all hearings before the Hearing Board. It specifies the method of filing petitions and their form; it provides for notice and answers; it specifies the place of hearing; it indicates the rights of parties during the hearing, the kind of evidence which may be adduced, official notice which may be taken by the Board, continuances, decisions and the effective dates of the decisions of the Board.

VI. Preventive Programs

A. Permits

Regulation II, Rules 10 through 25, covers the subject of permits; it applies to any person building, erecting, altering, replacing and operating or using any article, machine, equipment or other contrivance, the use of which may cause the issuance of air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.

Numerous items are exempted from this regulation, some of these include: vehicles; equipment used exclusively in connection with any structure designed and used exclusively as a dwelling for not more than 4 families; air conditioning and refrigeration equipment; boilers, water heaters or steam generators fired exclusively with natural gas or liquified petroleum gas; and natural draft hoods, stacks and ventilators, among other things.

Regulation V, Rules 75 through 86, covers orchard, field crop or citrus grove heaters and requires permits for the erection, alteration, replacement, operation or use of any such heater; it prohibits the use of certain types of heaters.

TABLE FOR RULE 54

PROCESS Wt/hr /lbs./	MAX. WEIGHT Disch/hr /lbs./	PROCESS Wt/hr /lbs./	MAX. WEIGHT Disch/hr /lbs./
250 or less	1.0	3600	5.6
300	1.2	3700	5.7
350	1.35	3800	5.8
400	1.5	3900	5.85
450	1.6	4000	5.9
500	1.8	4100	6.0
550	1.9	4200	6.1
600	2.0	4300	6.15
650	2.1	4400	6.2
700	2.2	4500	6.3
750	2.3	4600	6.4
800	2.4	4700	6.45
850	2.5	4800	6.5
900	2.6	4900	6.6
950	2.7	5000	6.7
1000	2.8	5500	7.0
1100	3.0	6000	7.4
1200	3.1	6500	7.7
1300	3.3	7000	8.1
1400	3.4	7500	8.4
1500	3.5	8000	8.7
1600	3.7	8500	9.0
1700	3.8	9000	9.4
1800	3.9	9500	9.7
1900	4.0	10000	10.0
2000	4.1	11000	10.6
2100	4.2	12000	11.3
2200	4.3	13000	11.9
2300	4.4	14000	12.5
2400	4.55	15000	13.1
2500	4.6	16000	13.7
2600	4.7	17000	14.4
2700	4.8	18000	15.0
2800	4.9	19000	15.6
2900	5.0	20000	16.2
3000	5.1	30000	22.2
3100	5.2	40000	28.3
3200	5.3	50000	34.3
3300	5.35	60000	40.0
3400	5.4	over 60000	Determine by extending curve
3500	5.5		

SANTA BARBARA, CAL.

I. Ordinances

Ordinance No. 512, July 28, 1905; Ordinance No. 1458, July 26, 1929; Ordinance No. 2321, April 12, 1951.

II. General Statement

Ordinance No. 512 prohibits use of petroleum, crude oil, hydrocarbon oil and products so as to allow escape of soot or dense smoke, declares such use to be a nuisance and provides penalties.

Ordinance No. 1458 forbids the use or maintenance of business premises so as to cause dust in large or unusual amounts injurious or unwholesome to human health or property or unreasonably offensive to human senses or to be spread on property of others.

Ordinance No. 2321 regulates, controls and suppresses air pollution in industrial, commercial and multiple dwelling zones, requires permits and provides penalties.

III. Administrative Organization

A. Building Inspector has power to authorize and permit construction or installation of certain equipment within buildings in the zones. /Ordinance No. 2321, sec. 4/.

B. Health Officer has power to permit certain construction or installation. /Ordinance No. 2321, sec. 4/.

C. City Council has power to hear appeals for non-issuance of permits. /Ordinance No. 2321, sec. 7/.

IV. Applicability

A. Sources

Use of petroleum, crude oil, hydrocarbon oil, or any product thereof for fuel in any stove, furnace or fireplace connected with any chimney, flue or smoke stack, in such manner as to allow or cause the escape of soot or dense smoke into the open air, is public nuisance. /Ordinance No. 512, sec. 1/.

B. Specific Pollutants

1. Dust

Carrying on of any business or maintaining any premises in such manner as to allow or cause dust in large or unusual amounts injurious to human health or property or unreasonably offensive to human senses or causing or allowing dust to be spread or blown onto premises, property or person of any other. /Ordinance No. 1458, sec. 1/.

2. Air Contaminants, Generally

Discharge from any source whatsoever such quantities of air contaminants or other material which causes injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, health or safety of any such persons or the public, or which cause injury or damage to property. /Ordinance No. 2321, sec. 9/.

V. Enforcement

A. Exceptions

Ordinance No. 2321 does not apply to and permit not required for:

1. Any mobile equipment.
2. Any structure designed for and used exclusively for a dwelling for less than 4 families.
3. Barbecue equipment used exclusively in connection with such structure. /Ordinance No. 2321, sec. 8/.

B. Penalties

1. Use of petroleum, crude oil, hydrocarbon oil or any products thereof, in violation of ordinance punishable by fine of not less than $1 nor more than $100, or by imprisonment for not less than 1 nor more than 10 days, or both. Each day of violation is a separate offense. /Ordinance No. 512, secs. 3, 4/.
2. Causing dust emission in violation of ordinance is misdemeanor punishable by a fine not exceeding $250, or by imprisonment for not more than 3 months or both. Each day of violation is separate offense. /Ordinance No. 1458, sec. 2/.
3. Construction, erection, alteration or installation of equipment without permit from Building Inspector and Health Officer is misdemeanor punishable by a fine

of not more than $300 or by imprisonment for 30 days or both. /Ordinance No. 2321, sec. 10/.

VI. Preventive Programs

A. Permits

1. Any person building, erecting, altering, replacing, constructing or installing any article, machine, equipment or other contrivance within a building, the use of which in its operation emits air contaminants, must first obtain authorization from the Building Inspector, who shall issue a permit to do so providing that the article, machine, equipment or other contrivance is constructed and equipped with proper antiair-contaminants or antiair-pollution devices.

   "Any person building, erecting, altering, replacing or installing any article, machine, equipment or other contrivance without a building permit shall first obtain a permit from the Health Officer from the City of Santa Barbara to do so."

/a/ Section applies only to the construction or installation of such equipment within the industrial, commercial and multiple dwelling zones within the City. /Ordinance No. 2321, sec. 4/.

2. Applications to be filed with Building Inspector accompanied by plans and specifications of the proposed installation which must be in sufficient detail to reveal the proposed means for the control of air contaminants and must show the extent of such control anticipated in the design or use of the equipment, except when standard commercial equipment is used the manufacturer's catalog number will be sufficient. /Ordinance No. 2321, sec. 6/.

3. If Building Inspector and the Health Officer refuse to issue permit, the applicant may appeal to the Council of the City within 10 days after denial of the permit.

BRIDGEPORT, CONN.

I. Ordinance

Air Pollution Control Ordinance of the City of Bridgeport; September 1957, with Rules and Regulations.

II. General Statement

An ordinance to control air pollution by prescribing standards of emission, prohibiting certain uses of open fires, regulating sources of dust dissemination, requiring installation permits and operating permits for equipment capable of causing air pollution, and providing penalties for violations. Government corporations and municipal corporations are included within its purview.

III. Administrative Organization

A. Bureau of Air Pollution Control within the Fire Department, headed by an assistant chief engineer who shall be designated the Director of Air Pollution Control. /sec. 3/.

His powers and duties shall include: /sec. 4/.

1. Administration of the Bureau and enforcement of this Ordinance.
2. Investigation of complaints, inspections and observations of smoke and other air contaminants.
3. Issuance of permits, certificates, and notices.
4. Examination of plans, specifications and applications.
5. Inspection of equipment.
6. Publication and dissemination of information on methods of reducing air pollution; and enlistment of the cooperation of civic, technical, scientific and educational organizations.
7. Recommendation to the Board of rules, regulations, amendments and modifications for its adoption.

Additional Powers and Duties include: /sec. 22/.

1. Authority to refuse or approve applications for permits and operating certificates, and to suspend or revoke them for non-compliance.
2. Requiring tests as a condition precedent to the approval

of installations.

3. Requiring samples and analyses of fuels.

4. Requiring stack analyses.

5. Requiring the written registration of points of emission. Should he deem any of the above to be necessary, procedures for their accomplishment are set forth in section 22.

B. Air Pollution Appeal Board of 5 members appointed by the Mayor to review appeals from decisions of the Director, and to adopt, amend and rescind rules and regulations recommended by the Director, after a public hearing. /secs. 5, 6/.

IV. Applicability

A. Sources

1. Fuel-burning equipment, process furnaces, internal combustion engines, motor vehicles, locomotives, floating equipment, portable equipment, stacks, premises or open fires. /sec. 10/.

2. Garbage, refuse, rubbish or other material may not be burned in an open fire except at such places and under such conditions and subject to such safeguards as may be prescribed by the Director and the Chief Engineer of the Fire Department. /sec. 15/.

3. Dust producing substances shall not be so handled, transported, worked, loaded, unloaded, treated or dealt with as, by the spreading or dissemination of dust, to annoy or disturb unreasonably, or to endanger the comfort, repose, health or safety of any person, or to cause detriment to the business or property of others. /sec. 16/.

4. All piles of coal, dirt, sand and other dust producing substances in the open air shall be covered or treated so as to effectively control the spreading or dissemination of dust. /sec. 17/.

5. No dust producing substance shall be transported through any street without protective covering, at all times, sufficient to prevent effectually the dissemination of dust therefrom into the open air or upon any public or private property. These provisions shall be enforced by the Police Department, and each violation shall constitute a separate offense. /sec. 18/.

B. Specific Pollutants

1. Smoke the density of which is equal to or greater than No. 2 Ringelmann is prohibited, except:

/a/ Smoke equal to but not darker than No. 2 may be emitted for periods aggregating 3 minutes in any period of 15 minutes.

/b/ Smoke equal to but not darker than No. 3 may be emitted for a period of 5 continuous minutes when a firebox is being cleaned or a new fire is being built in a cold boiler or furnace. /sec. 10/.

2. Dust in the gases from any fuel-burning equipment, process furnace, stack, premises or open fire may not exceed 0.85 lbs. per 1,000 lbs. of gases, adjusted to 50 percent excess air for products of combustion, except:

/a/ For any equipment constructed or installed prior to the effective date of the Ordinance, this concentration may be exceeded, but a dust collecting efficiency of at least 90 percent for any dust separating apparatus will be required.

/b/ This concentration may be exceeded during the cleaning periods, provided the methods used and the period of time are approved by the Director. /sec. 11/.

3. Fumes, vapors, odors and noxious gases shall not be emitted in such quantity as to be detrimental to any person or to the public or to endanger the health, comfort and safety of such person or of the public, or in such manner as to cause injury or damage to property or business. /sec. 12/.

NOTE - Rules and Regulations promulgated under the authority of this Ordinance cover plans and specifications, combustion air supply, heating boilers, power boilers, portable boilers and miscellaneous portable equipment, process furnaces, oil burners, mechanical stokers, pulverized coal burners, incinerators, stacks and breechings, dust collectors, scrubbers, wet collectors and miscellaneous collecting equipment, smoke alarms, air jets and steam-air jets. Of these, those particularly pertinent to air pollution control include:

/1/ All existing heating boilers shall use only anthracite or coke as fuel unless they are equipped with gas burners, oil burners, or mechanical stokers. /No. 10/.

/2/ All new and existing vertical fire tube boilers shall use only anthracite or coke as fuel, unless such boilers are equipped with gas burners or oil burners. /No. 16/.

/3/ No new or existing tar kettles or asphalt kettles shall be used with an open fire. All tar kettles and asphalt kettles shall burn anthracite or coke or shall be equipped with gas burners or oil burners approved by the Director. /No. 18/.

/4/ The installer of all installations burning No. 6 oil shall provide a poster giving installation data and instructions on maintenance and operation procedures to prevent stack emissions in violation of the Air Pollution Ordinance. Among the information to be listed, the following shall be included:

Operating Instructions

/a/ Procedure for operating smokelessly.

/b/ Procedure for minimizing smoke when starting cold.

Warning - Poor operation and neglect of maintenance or burning a heavier oil than specified above may cause illegal emissions of smoke. /No. 24/.

/5/ No incinerator used for the disposal of industrial or commercial scrap or waste material or refuse, garbage or waste, and no crematory shall be constructed or altered without an installation permit. /No. 37/.

/6/ Incinerators shall be so designed that when operating there is no free flow of objectionable contaminants, i.e., smoke, dust, fumes or odors, to the open air. To prevent the escape of such gases, means may be employed, subject to the approval of the Director, such as baffles, settling chambers, secondary combustion chambers, screens, dust collectors, scrubbers, etc. If deemed adequate by the Director, mechanical or chemical devices may be used. /No. 39/.

/7/ The top of any stack shall extend sufficiently above the roof of the building of which it is a part, and shall extend sufficiently above and be far enough away from any nearby building or structure to prevent down shafts or the creation of a nuisance by the discharge of products of combustion. /No. 50/.

/8/ Where an existing stack is so located that it may constitute a nuisance to the occupants of a building about to be built, the owner of the new building shall be required to extend the existing stack or make other provisions to meet the approval of the Director. /No. 51/.

/9/ The Director reserves the right to require a smoke test to be made on any stack. /No. 57/.

/10/ Any boiler or furnace equipped with a pulverized coal burner or spreader stoker shall be equipped with a dust collector, approved by the Director, capable of keeping dust emission within the limits specified by the Air Pollution Ordinance. /No. 60/.

/11/ Any cupola, kiln, process furnace or other equipment capable of emitting dust into the atmosphere, shall be equipped with suitable dust collectors, approved by the Director, capable of keeping dust emission within the limits specified in the Ordinance. /No. 61/.

/12/ A regular inspection schedule for all dust collectors, which discharge their effluent into the open air and which have a capacity greater than 2,000 CFM, must be set up by the owners or operators of such collectors, and a written record of such maintained for periodic inspection by the Director. Owners or operators of dust collectors of a capacity less than 2,000 CFM, which in the opinion of the Director are inefficient or inadequate for successful operation must, upon the request of the Director, maintain records similar to those required for dust collectors of a capacity larger than 2,000 CFM. This regulation applies to existing as well as to new equipment. /No. 62/.

/13/ A regular maintenance schedule for all dust collectors, including a schedule of the removal of dust from all dust hoppers, which discharge their effluent into the open air and which have a capacity greater than 2,000 CFM, must be set up by owners and operators of such collectors, and a written record of such maintained for periodic inspection by the Director. Owners or operators of dust collectors of a capacity less than 2,000 CFM, which in the opinion of the Director are inefficient or inadequate for successful operation must, upon the request of the Director, maintain records similar to those required for dust collectors of a capacity larger than 2,000 CFM. This regulation applies to existing as well as to new equipment. /No. 63/.

/14/ Plans and specifications submitted should give complete information on the proposed dust collectors. /No. 64/.

/15/ Accompanying each application for dust collectors there shall be a statement showing the contemplated collecting efficiency of the proposed installation. /No. 65/.

/16/ Plans and specifications for scrubbers, wet collectors, and miscellaneous collecting equipment should give complete information on the proposed collecting equipment, and should be accompanied by a statement showing its contemplated collecting efficiency. /Nos. 66, 67/.

/17/ The provisions of 12 and 13 above are applicable also to scrubbers, wet collectors and miscellaneous collecting equipment. /Nos. 68, 69/.

/18/ All solid or liquid fuel-burning equipment hereafter installed having more than 400 sq. ft. of boiler heating surface or having an hourly fuel consumption of more than 150 lbs. of coal or more than 14 gallons of residual oil, shall be provided with an automatic smoke alarm with the sensitive element set at a suitable location on the breeching between the boiler and stack. /No. 70/.

/19/ Upon a violation of IV-B1, above, and where required by the Director, fuel-burning equipment using residual oil or bituminous coal shall be provided with an automatic smoke alarm. /No. 71/.

/20/ If any fuel-burning plant repeatedly emits smoke in violation of the provisions of the Ordinance, the Director shall have authority to recommend the installation of over fire air or steam-air jets to aid combustion. /No. 72/.

V. Enforcement

A. Unlawful Conduct

1. To tamper with or remove the seal on any equipment sealed by the Director without his written authorization to do so. /sec. 14/.
2. To interfere with the Director or the personnel of the Bureau in the performance of duty, or to refuse them entrance to premises at reasonable hours. /sec. 20/.

B. Sealing

1. After previous notification of 3 or more violations of IV-B, above, within a 12-month period, the owner or operator of any premises, motor vehicle or portable equipment may be notified to show cause, within 10 days, why the offending equipment should not be sealed. If upon the hearing the Director finds that adequate corrective measures have not been taken, he may order the equipment to be sealed until the person submits a statement of the intended changes in equipment with a definite plan for their accomplishment and the approximate date of compliance which meets the approval of the Director. /sec. 13/.

2. Any violation of the installation permit shall be grounds for a stop-work order and sealing of the equipment. /sec. 8g/.

3. Any equipment for which an operating certificate is required may be sealed if it is being operated without such certificate. /sec. 9c/.

C. Period of Grace

Whenever it is adequately demonstrated that compliance with the terms of the Ordinance cannot be effectively and immediately accomplished, the Director shall have authority to grant a temporary permit for the continuance of such non-complying practices or the continued operation of such non-complying equipment, provided adequate steps are being or will be taken to secure compliance. The duration of the permit shall not be greater than what is reasonably necessary to effect compliance. /sec. 19/.

D. Procedure

Appeals may be taken from the refusal of a permit or certificate, or any decision of the Director. They shall be in writing, taken within 10 days of the decision appealed from, and shall state the reason for the appeal and the relief sought. They shall be accompanied by a deposit of $25 which will be returned if the appellant prevails. A hearing at which the appellant may appear personally or by agent or attorney shall be scheduled not less than 10 nor more than 30 days from the filing of the appeal, with due notice to the appellant and to the public. The appeal shall stay the decision complained of until final decision, which shall be rendered within 10 days of the hearing. /sec. 23/.

E. Penalties

Any person violating the provisions of the Ordinance or disobeying the orders of the Director shall be fined not less than $25 nor more than $100 for the first offense, and not less than $50 nor more than $200 for each succeeding offense, or imprisoned not more than 30 days, or both. Each day's violation shall constitute a separate offense. /sec. 24/.

VI. Preventive Programs

A. Installation Permits

1. Required for the construction, reconstruction, installation or alteration of any equipment capable of emitting into the open air smoke, soot, dust, fumes, odors, vapors, noxious gases or products of combustion or of incomplete combustion, or any equipment the use of which may eliminate or reduce or control the emission of any air contaminant except -

/a/ Any building used exclusively for dwelling purposes:

/1/ Containing less than 4 dwelling units, or

/2/ Containing 4 or more dwelling units but having no central heating plant.

/b/ Internal combustion engines, locomotives, motor vehicles and portable equipment.

/c/ Repairs to or minor alterations of previously approved equipment.

/d/ Any small commercial establishment with heating equipment wherein the maximum fuel input does not exceed 350,000 BTU per hour. /sec. 7/.

2. Applications shall be in writing, accompanied by plans and specifications, and payment of the prescribed fee. /sec. 8/.

3. Emergency alterations and repairs may be made without a permit, but an application therefor shall be filed within 48 hours of the beginning of such work. /sec. 8/.

4. A separate installation permit shall be required for each unit of equipment or apparatus. /sec. 8/.

5. The permit shall be cancelled automatically if the work covered thereby is not started within 1 year of issue or is suspended for more than 1 year. /sec. 8/.

B. Operating Certificates

1. Required for the use of any equipment for which an installation permit was required.
2. Shall not be issued until the equipment has been inspected and approved by the Director.
3. Shall be conspicuously displayed in room in which the equipment is located. /sec. 9/.

VII. Miscellaneous

No permit shall be issued for the erection, construction, or alteration of any building or structure, if incident thereto any equipment is to be constructed, reconstructed, installed or altered for which an installation permit is herein required, until the Director shall have issued the permit or indicated that, in his judgment, the plans and specifications submitted provide for or will permit the installation of facilities adequate for compliance herewith. /sec. 25/.

EAST HARTFORD, CONN.

I. Ordinance

Smoke Abatement Ordinance of East Hartford.

II. General Statement

An ordinance providing for the regulation of the construction of fuel-burning equipment, the abatement of nuisances created by the emission of dense smoke, and the establishment of penalties for violations of its provisions.

III. Administrative Organization

A. Director of Public Works who shall:

1. Investigate violations and complaints of violations.

2. Collect evidence.

3. Present evidence to the prosecuting attorney for his action. /sec. 4/.

B. Police shall execute abatement orders issued by the Director of Public Works. /sec. 8/.

IV. Applicability

A. Sources

1. Emissions of dense smoke from the smoke stack of any locomotive, steamboat, steam tug, steam roller, steam derrick, steam pile driver, tar kettle, or other similar machine or contrivance or from the smoke stack of any building or premises except for a period of six minutes either consecutive or aggregate in any one hour during which the fire box is being cleaned or a new fire is being built, is a nuisance. /secs. 6 and 7/.

2. The Ordinance shall not apply to private residences or apartments occupied by fewer than nine families or the Town Fire Department. /sec. 11/.

B. Specific Pollutants

The Ordinance shall apply to smoke of a density greater than No. 3 Ringelmann. /sec. 5/.

V. Enforcement

A. Abatement

Any nuisances caused by violations of IV shall be abated by order of the Director of Public Works. The party served with the order may apply for a stay, or modification of the order, which request the Director shall grant. /sec. 8/.

B. Procedure

1. Hearing

Upon request by the party served with the abatement order /See V A/, a hearing at which proof and facts may be presented shall be afforded the violation. /sec. 8/.

C. Penalties

1. First offense - $50.
Successive offenses - $100.

2. The prosecution as maintenance of any alteration or construction without a permit /See VI A/, shall be a single and separate offense each day of prosecution or maintenance.

3. Each violation of the Ordinance in any other respect shall constitute a separate offense. /sec. 12/.

VI. Preventive Programs

A. Permits, Registration, Plan Approval

1. The construction or major alteration of a stationary steam plant, boiler or furnace so as to increase its capacity or lessen its efficiency or method of smoke prevention, requires the obtaining of a permit. /See III D/. /secs. 2 and 3/.

2. Issuance of the permit shall not exempt any person from prosecution on account of violations of IV. /sec. 3/.

B. Temporary Permits

1. Director of Public Works shall have authority to issue permits:

/a/ Allowing emission of dense smoke for a period not exceeding one hour, in emergency cases. /sec. 6/.

/b/ Of a temporary nature, permitting emission of dense smoke for a period up to 6 months after the Ordinance is enacted provided the person applying for the permit satisfies the Director that he will make necessary changes to prevent the emission before expiration of the period.

After that time, the Director shall issue such permits only if the public convenience requires it and only for a period of 6 months. /sec. 10/.

NEW HAVEN, CONN.

I. Ordinance

City of New Haven, Ordinance May 23, 1953.

II. General Statement

An ordinance regulating air pollution by establishing standards of permissible emission, prohibiting certain uses of open fires, requiring installation permits for fuel-burning equipment, and prescribing penalties for violations.

III. Administrative Organization

A. Air Pollution Control Engineer, appointed by the Director of Public Health, who shall make the investigations, inspections, and tests necessary for the enforcement of this ordinance. /sec. 3/.

B. Appeal Board of 5 members, appointed by the Mayor, to hear appeals from decisions of the Air Pollution Control Engineer. /sec. 4/.

IV. Applicability

A. Sources

1. Open burning of garbage, refuse or rubbish is prohibited except in the manner prescribed by the Department of Fire Service. /sec. 13/.

B. Specific Pollutants

1. Smoke /sec. 5/.

/a/ Not darker than No. 1 Ringelmann for domestic installations for heating and hot water in one and two family dwellings.

/b/ Not darker than No. 1 Ringelmann for heating and hot water installations in apartments, office buildings, etc., but densities not greater than No. 3 Ringelmann are permitted for not more than 4 minutes in any 30 minutes.

/c/ Not darker than No. 2 Ringelmann for all other stationary installations, but densities not greater than No. 3 are permitted for not more than 4 minutes in any 30 minutes.

2. Dust /sec. 6/.

/a/ Dust from stacks shall not exceed a concentration of 0.85 pounds per 1,000 pounds of air or gas, nor more than 0.20 pounds of dust larger than that which will pass through a U.S. Standard Mesh Sieve per 1,000 pounds of air or gases.

/b/ In the case of gases from combustion processes, the 1,000 pounds of gases shall be adjusted to 50 percent excess air.

3. "No person shall cause, suffer or allow to be emitted into the open air odor in such quantity as to create a public nuisance to the detriment of public welfare or health." /sec. 7/.

V. Enforcement

A. Unlawful Conduct

To interfere with the Air Pollution Control Engineer, or his agents, in the performance of duty, or to refuse them entrance to premises wherefrom smoke, dust, or odor is being, or is suspected of being, discharged into the open air. /sec. 14/.

B. Period of Grace

The Air Pollution Control Engineer may issue a warning and give a violator opportunity to comply with the ordinance before filing a formal complaint. /sec. 19/.

C. Procedure /sec. 12/.

1. Appeals from any decision, ruling, or order of the Air Pollution Control Engineer may be taken to the Appeal Board by filing a notice of appeal, the grounds therefor, and the relief sought with the Air Pollution Control Engineer within 15 days after the action appealed from.

2. A deposit of $5 shall be required at the time of filing the appeal to cover the cost of the hearing.

3. The Air Pollution Control Engineer shall furnish the Appeal Board with all matters relevant to the appeal.

4. A hearing shall be held not less than five nor more than ten days from the filing of the appeal, all

interested parties having been notified thereof by mail.

5. The decision appealed from shall be held in suspension until the Appeal Board has rendered a decision, such decision to be reached within 10 days after the hearing.

6. The appellant may appear in person at the hearing, or be represented by an attorney or agent.

7. If the order appealed from is affirmed, costs shall be forfeited to the City of New Haven; if reversed, the City shall bear the costs and the deposit shall be returned to the appellant.

D. Penalties

Any violation of the ordinance constitutes a misdemeanor punishable by a fine of not more than $100, or imprisonment for not more than 30 days, or both, and each day's violation may constitute a separate offense. /sec. 16/.

VI. Preventive Programs

A. Installation Permits

1. Required for the construction, reconstruction, installation or alteration of any fuel-burning equipment or any other equipment capable of emitting pollutants, except: /sec. 8/.

/a/ Oil-fired equipment burning No. 1 and No. 2 fuel oil when standard commercial equipment is used.

/b/ Gas-fired equipment when standard commercial equipment is used.

/c/ Solid-fuel-fired equipment when standard commercial equipment is used and the maximum fuel input will not exceed 350,000 B.T.U./hr.

/d/ Equipment not permanently installed in a stationary building or structure.

/e/ Repairs and minor alterations to previously approved equipment or to equipment installed prior to the effective date of the ordinance.

2. Applications shall list and identify the equipment and indicate the means by which compliance with the ordinance will be assured. Plans and specifications

may be submitted in fulfillment of this requirement. /sec. 8/.

3. A $5 fee shall accompany the application. /sec. 8/.

4. Applications shall be acted on by the Air Pollution Control Engineer within a reasonable time, and the applicant notified in writing of the action taken. /sec. 9/.

5. The Air Pollution Control Engineer shall be notified immediately of the completion of the work for which the permit was granted and shall thereupon inspect it for compliance with the provisions of this ordinance. /sec. 10/.

6. If the Air Pollution Control Engineer, in his discretion, shall require a test of the equipment, such test may be conducted by himself, his designate, a specialist engaged by him, or he may accept a test conducted by the owner of the equipment or his representative. /sec. 11/.

NORWALK, CONN.

I. Ordinance

City of Norwalk Ordinance, effective date June 9, 1931.

II. General Statement

An ordinance regulating the emission of smoke and other solids, gases and fumes; to create a Commission on Smoke Regulation; to regulate the construction, installation, reconstruction, alteration or repair of fuel-burning apparatus; and to prescribe penalties for violations.

III. Administrative Organization

A Commission on Smoke Regulation, consisting of the Health Officer, the City Engineer and a member of the City Council, appointed by the Mayor and approved by the City Council. The powers and duties of the Commission include:

1. To maintain records of all applications, permits and certificates, smoke observations, and all work done by the Commission, which shall be open to public inspection. /sec. 11/.

2. To prepare and promulgate rules and regulations relating to fuel-burning equipment. /sec. 14/.

IV. Applicability

A. Sources

Fuel-burning equipment, boilers, furnaces, stokers, flues, breechings, chimneys, stacks, locomotives and steamboats.

B. Specific Pollutants

1. Smoke, fly ash or fumes

/a/ The shade of which is equal to or greater than No. 3 Ringelmann, or which is so dense as to prevent seeing through it at the point of emission into the external air, emitted for a period or periods aggregating 30 seconds or more in any period of 3 minutes is prohibited, except for locomotives and steamboats. /sec. 4/.

/b/ The shade of which is equal to or greater than No. 2 Ringelmann, or which is so dense as to be dimly seen through at the point of emission into the external air, except for locomotives or steamboats, for a period of one hour, and the emission of such smoke, fly ash or fumes from any locomotive or steamboat for a period or for periods aggregating 4 minutes in any period of 15 minutes is prohibited. /sec. 5/.

V. Enforcement

A. Unlawful Conduct

1. The emission of smoke, fly ash or fumes in quantities in excess of that provided by the Ordinance.
2. For any engineer, contractor or other persons or corporation to do the work of the constructing, installing, reconstruction, altering or repairing any furnace, boiler furnace, stack or other fuel-burning apparatus connected with stack, unless a permit has been obtained by the person or corporation for whom such work is being done. /sec. 8/.
3. For any person or corporation to use or cause to be used any new or remodeled or reconstructed plant or apparatus connected with a stack, including portable apparatus, for the production of heat and/or power unless a certificate for operating such plant or apparatus has been obtained. /sec. 9/.
4. To deny admittance to the Commission on Smoke Regulation or any member of the Commission, or to interfere with such persons or person in the performance of their or his duties. /sec. 12/.

B. Inspection

The Commission on Smoke Regulation or any member of such Commission shall have the right in the performance of their duties, at all reasonable hours, to enter all premises from which smoke is being emitted or has been emitted. /sec. 12/.

C. Penalties

Any person or corporation violating any of the provisions of the Ordinance shall upon conviction be fined not exceeding $50, and each day's violation shall constitute a separate offense. /sec. 13/.

VI. Preventive Programs

A. Installation Permits

1. Required for the construction, installation, reconstruction, alteration or repair of any furnace, boiler furnace, stack, or other apparatus connected with the stack, including portable apparatus, except that no permit is required for minor or emergency repairs which do not involve any substantial alteration in the method or efficiency of smoke prevention.

2. Applications for permits shall be accompanied by plans and specifications showing:

/a/ The style and dimensions of the furnace, boiler furnace, stack, and/or other apparatus connected with a stack, intended to be used.

/b/ A description of the building or part thereof in which such equipment is located, including the means provided for regulating the temperature of such building and ventilating the same.

/c/ Generally all provisions made for preventing smoke; together with a statement of the kind of fuel proposed to be used and of the operating requirements to be made of the furnace or furnaces.

3. Applications shall be acted upon by the Commission on Smoke Regulation within 10 days of filing. /sec. 6/.

B. Operating Certificate

1. Required of any person or corporation who shall use or cause to be used any new or remodeled or reconstructed plant or apparatus connected with a stack, including portable apparatus, for the production of heat and/or power. /sec. 7/.

STAMFORD, CONN.

I. Ordinance

Ordinance No. 21, June 15, 1950.

II. General Statement

An ordinance to control the emission of dense smoke, soot, cinders and obnoxious fumes produced by locomotives, steamboats, steam tugs, steam rollers, steam derricks, steam pile drivers, tar kettles, stills or similar devices; by regulating the use of bituminous coal, nuisance abatement, and the imposition of fines.

III. Administrative Organization

A. Building Inspector

1. Shall investigate violations and complaints of violations.
2. Shall gather evidence of violations and present it to the prosecuting attorney for his action.
3. May order any nuisance specified in the Ordinance to be abated, and cause such order to be served on the offender. /secs. 2, 6/.

B. Department of Police shall have the duty of executing any order of the Building Inspector under this Ordinance when requested by him to do so. /sec. 8/.

IV. Applicability

A. Sources

1. Smoke

   The use of bituminous or soft coal for the purpose of combustion is prohibited, unless proper mechanical or other contrivances are used in connection therewith so as to eliminate smoke, the precipitation of soot, or the precipitation of cinders. /sec. 3/.

2. Steam rollers, derricks, pile drivers, tar kettles, stills, smoke stacks, chimneys: except for 9 minutes in any one hour when the firebox is being cleaned or a new fire is being built, the emission of dense smoke /defined below/, soot, or obnoxious fumes from the smoke stack of any steam roller, steam derrick, steam pile driver, tar kettle, still, or other similar structure or device, or from the smoke stack or chimney

of any building or upon any premises, is declared to be a nuisance. /sec. 4a/.

3. Locomotives

Except for 30 seconds in any 5 minutes, the emission of dense smoke from the smoke stack of any locomotive is declared to be a nuisance. The following, however, shall be permitted:

/a/ smoke may be emitted for 1 minute in any 5 minutes from the stacks of locomotives moving 6 cars or more.

/b/ dense smoke may be emitted for not more than 3 minutes from the stack of any locomotive unexpectedly stopped by breakdown, signal or sudden emergency.

/c/ dense smoke may be emitted from the stacks of locomotives in and about roundhouses for 30 minutes when the fire is being built or rebuilt after cleaning. /sec. 4/.

B. Specific Pollutants

Smoke shall be considered dense when it is of greater density than No. 3 Ringelmann. /sec. 5/.

V. Enforcement

A. Nuisance

Abatement may be ordered by the Building Inspector through the agency of the police department. Failure to comply therewith may be grounds for abatement, the expense thereof to be collected by the corporation counsel of the City of Stamford from the offender, in addition to penalties hereinafter provided. /secs. 6, 8/.

B. Procedure

It shall be the duty of the Building Inspector to suspend his order and allow the recipient fair and reasonable opportunity to present argument against its execution, upon application by the person served before the date specified for compliance. /sec. 7/.

C. Variance

A temporary permit for the emission of dense smoke for a period not to exceed 6 months may be issued by the controller with the approval of the Building Inspector if he is satisfied that the public convenience so requires. /sec. 9/.

D. Penalty

The penalty for violating this Ordinance shall be a fine of not more than $50 for the first offense, and not more than $100 for each succeeding offense. /sec. 10/.

VI. Preventive Programs

None.

WILMINGTON, DELAWARE

I. Ordinance

Sections 312 through 315 of the City Code.

II. General Statement

The Ordinance provides for Smoke Inspectors; prohibits certain emissions of dense smoke; and provides for penalties for violations.

III. Administrative Organization

Chief Engineer of the Bureau of Fire. /sec. 313/.

IV. Applicability

A. Sources

None.

B. Specific Pollutants

No person shall cause the emission of smoke the shade or density of which is equal to No. 2 Ringelmann for a period aggregating 8 minutes or more in any period of 30 minutes, or smoke the shade or density of which is equal to No. 3 Ringelmann, for a period or periods aggregating 3 minutes in any period of 15 minutes, when building a new fire, cleaning a fire, or when breakdown of equipment occurs so as to make it apparent that the emission of smoke was not reasonably preventable. /sec. 314/.

V. Enforcement

A. Nuisance

Whoever shall burn or cause to be burned any fuel in violation of this Ordinance, shall be deemed guilty of a common nuisance. /sec. 315/.

B. Variance

If, in the judgment of the Smoke Inspector, the infraction of the standards of this Ordinance is caused by equipment or conditions which cannot be remedied immediately, a reasonable time shall be allowed in which to correct or remedy the defective equipment or conditions, and the Chief Engineer of the Bureau of Fire shall, in his discretion, determine the period which constitutes a reasonable time in each case and shall notify the person, firm, or corporation involved as to the date upon which compliance with the standards of this Ordinance must be observed, but in no case shall the period exceed 3 months. /sec. 315/.

C. Penalty

Whoever violates this Ordinance shall be subject to a fine of between $25.00 and $50.00. /sec. 315/.

VI. Preventive Programs

None.

DISTRICT OF COLUMBIA

I. Ordinance

Title 6, Chapter 8, D. C. Code, 1951 /Public Law 279, 74th Cong., 1st Sess./ and Fuel Burning Equipment Regulations.

II. General Statement

An Act of Congress to prevent the fouling of the atmosphere in the District of Columbia by smoke and other foreign substances /enacted in 1935/ with regulations promulgated pursuant thereto /amended to 1961/.

III. Administrative Organization

"The Commissioners of the District of Columbia shall be responsible for the enforcement of this Act and may direct the Police Department, the Health Department, or any officer or employee of the government of the District of Columbia to perform such service as necessary in connection with such enforcement." /P.L. 279, sec. 4/.

"The Commissioners of the District of Columbia are hereby authorized and directed to make and promulgate reasonable classifications and regulations for the installation and operation of combustion and all other devices susceptible for use in such manner as to violate the purpose of this Act, and the said Commissioners may from time to time alter, amend or rescind such regulations and promulgate such amended or additional regulations as they may in their discretion deem necessary." /P.L. 279, sec. 2/.

IV. Applicability

A. Sources

1. Buildings, stationary or locomotive engines, motor vehicles, places, premises, furnaces and boilers.
2. The Rules and Regulations cover requirements for stokers, pulverized coal, oil, package generators, net load, boiler clearance, stacks, breechings, vertical boilers, Scotch marine boilers, portable boilers, process furnaces, stills and conversion burners. Among the provisions with particular applicability to air pollution are:

/a/ Heating boilers and hot water supply boilers having an Equivalent Direct Radiation rating of less than 1,200 sq. ft. of steam radiation, or 1,800 sq. ft. of water radiation, shall burn coke, anthracite, or shall be equipped with underfeed stoker, oil burner, or gas burner. /Regs. IV. 1. c/.

/b/ An acceptable method of collecting fly ash from the stacks or breechings of all pulverized coal plants shall be provided. /Regs. IV. 3. a/.

/c/ If it is impractical to obtain the height of stack as indicated /in tables/ an induced draft fan may be used, subject to the approval of the Director, provided the discharge from the stack will not become a nuisance to neighboring buildings. /Regs. IV. 8. f/.

/d/ The top of any stack shall extend sufficiently above the roof of the building of which it is a part, and shall extend above or be far enough away from any nearby building to prevent down drafts or the creation of a nuisance by the discharge of smoke or the gases of combustion. /Regs. IV. 8. i/.

/e/ Where an existing stack is so located that it will constitute a nuisance to the occupants of a building about to be built, the owner of the new building shall be required either to extend the existing stack or make other provisions to meet the approval of the Director. /Regs. IV. 8. j/.

/f/ All new fuel burning plants having more than 300 sq. ft. of boiler heating surface or its equivalent shall be equipped with smoke indicators, mirrors, or similar devices, approved by the Director, to enable the fireman to easily observe smoke conditions from the boiler room at all times, unless the top of the stack is readily visible to the firemen. /Regs. IV. 11. a/.

/g/ Where oil of grade 5 or 6 is used, an approved electric eye type smoke alarm shall be installed, subject to the approval of the Director, in an accessible position. Such instrument shall be so connected either to shut down the oil burner in the event of dense smoke being made or be provided with a loud bell or horn capable of being heard outside of the boiler room and above the noise of other equipment. It shall have a dial or gage calibrated to indicate variations in smoke density. It shall be maintained in condition to operate and shall not be shut off at any time while the boiler is in service. /Regs. IV. 11. b/.

/h/ No person shall operate any portable boiler, steam shovel, portable crane, derrick, hoist, road roller, tar kettle, asphalt kettle, or any other similar portable equipment capable of emitting smoke until he shall have signed a fuel agreement and obtained a permit. All such equipment shall be operated by internal combustion engine or electric motor; tar and asphalt kettles shall use only oil burners. /Regs. IV. 14. a, c/.

/i/ "Detailed description and drawings of any furnace, still, or other apparatus, capable of causing smoke, cinders, dust gas or odors, showing the design, amount, and kind of fuel to be used, etc., shall be submitted for approval." /Regs. IV. 15/.

/j/ Except as hereinafter provided, no person shall kindle outside of any building or premises, or in any open lot, or in any public or private place outside of any building, an open fire, unless he shall have first obtained from the Director, a permit authorizing such kindling.

/1/ No permit shall be issued unless the Director shall be satisfied that there is need for the kindling of the fire, and if the same is requested for the disposal of material by burning, that there is no available practical alternative method for its disposal. No such permit shall be issued unless the Fire Chief is satisfied that no hazardous condition will be created by such kindling or burning.

/2/ Any permit issued hereunder may be limited by the Director or the Fire Chief or both by the imposition of conditions in connection with any authorized kindling or burning.

/3/ Nothing herein contained shall preclude the use of outdoor fire places or other appliances for outdoor cooking used exclusively for such non-commercial purposes, or of salamanders or other devices used for heating by construction or other workers, provided no smoke violation or other nuisance is created. /Regs. IV. 16. a-d/.

/k/ No incinerator for the burning of any combustible refuse or material shall be installed or constructed in any building, or on any premises unless it is a multiple-chamber incinerator, or combustion equipment determined by the Director to be equally effective for the purpose of air pollution control. /Regs. V. 1/.

/1/ Domestic incinerators shall not be connected into a stack the height of which is in violation of existing restrictions pertaining to adjoining buildings and which may create a nuisance to the occupants therein by the discharge of smoke, fly ash or the gases of combustion. /Regs. V. 2. 8/.

B. Specific Pollutants

1. No person shall cause, suffer, or allow dense smoke to be discharged from any building, stationary or locomotive engine, or motor vehicle, place or premises within the District of Columbia. /P.L. 279, sec. 1/.

/a/ The term dense smoke shall mean smoke of a shade as dark or darker than No. 2 Ringelmann. /Regs. I. 3. b/.

/b/ No person shall permit the discharge into the open air for a period aggregating more than 3 minutes in any 1 hour from any source whatever smoke the density of which is:

/1/ as dark or darker than No. 2 Ringelmann, or

/2/ of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke of No. 2 Ringelmann. /Regs. IV. 18. a/.

2. The owners, lessees, tenants, occupants, and managers of every building or place in or upon which a locomotive or stationary engine, furnace, or boiler is used shall cause all ashes, cinders, rubbish, dirt, and refuse to be removed to some proper place, so that the same shall not accumulate, nor shall any person cause, suffer, or allow cinders, dust, gas, steam, or offensive or noisome odors to escape or to be discharged from any such building, or place, to the detriment or annoyance of any person or persons not being therein or thereupon engaged. /P.L. 279, sec. 1/.

/a/ "No person shall cause or permit the emission or discharge into the open air from any source whatsoever such quantities of cinders, dust, fly ash, soot, paper ash, or other similar air contaminants to the detriment or annoyance /of/ any person or persons or which affects the comfort, health or safety of any such person or persons." /Regs. IV. 18. b/.

V. Enforcement

A. Unlawful Conduct

"It shall be unlawful for any person to deny admittance to /the Chief/ or his assistants or to interfere with him or them in the performance of his or their duties." /Regs.

II. 3. g/.

B. Procedure and Penalties

"Enforcement of this Act shall be upon information by the corporation counsel in the police court of the District of Columbia. Any person convicted of violating this Act or any regulation of the Commissioners made hereunder shall be punished by a fine not to exceed $500 for each and every offense." /P.L. 279, sec. 3/.

VI. Preventive Programs

A. Permits

1. Required for the construction, installation, reconstruction, alteration, or repair of any boiler, water heater, furnace, oven, stoker, oil burner, gas burner, apparatus to burn pulverized coal, or other apparatus connected with the boiler, breeching or stack, or any apparatus which may cause dense smoke, cinders, dust, gas, steam or offensive or noisome odors to be discharged into the air, or for changes in or additions to the heating system, domestic hot water load, process work or other load whereby the load on the boiler is materially increased, except:

/a/ Repairs which do not increase the capacity of such boiler or furnace or do not involve any alteration or addition to such boiler, furnace, or other apparatus, or which do not involve any alteration in the method of smoke prevention.

/b/ Boilers, furnaces, stacks, or other apparatus, except domestic incinerators, connected with the stack for use in a private residence.

2. Applications shall show:

/a/ The nature of the work to be done.

/b/ The size and make of the boiler or other equipment.

/c/ The size and make of the burner or stoker.

/d/ The fuel to be used.

/e/ The size of the breeching and stack.

3. Applications must be accompanied by a sketch or drawing showing:

/a/ Location of the boiler in the boiler room.

/b/ Size and location of openings for admission of air to boiler room.

/c/ Size and location of breeching including damper and cleanout doors.

/d/ Method of installation of stoker, oil burner, or other equipment.

4. A permit to install or relocate any boiler, furnace, stack, incinerator or other apparatus connected with the stack shall be issued only after the Director has permitted installation or relocation of such equipment.

5. Permits shall be valid and in force for a period not exceeding 6 months, except that work begun within this period and continuously in progress for more than 6 months may proceed to completion under authority of the original permit.

6. The Chief, Smoke and Boiler Section, through one of the smoke inspectors, shall notify the contractor, his foreman, or representative on the job of any violations of the permit, fixing a reasonable time for the making of necessary changes, and if the work is not put in conformity within the time set, he shall revoke the permit. /Regs. II. 3. a, b, m, n, o/.

B. Certificates of Inspection

1. Required for the use of any new, remodeled, or reconstructed boiler, furnace, incinerator, stack, or other apparatus connected with the stack, showing that the construction or reconstruction is in compliance with the plans and specifications submitted when making application for an installation permit.

2. Shall be issued if, upon inspection by the Chief or one of his inspectors, the completed work is found to be in accordance with plans, specifications, and information given on the application. /Regs. II. 3. d, e/.

MIAMI, FLORIDA

I. Ordinance

Article II, Sections 59-9 through 59-21 of the City Code of 1945, as amended March 2, 1949.

II. General Statement

This Ordinance provides for the appointment of a Smoke Inspector; prohibits certain emissions; declares what constitutes a nuisance; provides for abatement of nuisances; provides for permits; defines the rights and duties of the Smoke Inspector; and provides penalties for violations. The only product of fuel combustion that is concerned is sulphur dioxide.

III. Administrative Organization

Chief Inspector of boilers, elevators and smoke, herein called Smoke Inspector has the duty to enforce this Ordinance. /sec. 59-20/.

IV. Applicability

A. Sources: /See IV B/.

B. Specific Pollutants:

1. No person shall discharge from any source, air contaminants equal to or darker than No. 2 Ringelmann for more than six minutes in one hour. /sec. 59-13/.

2. No person shall discharge air contaminants or other material which endanger the comfort, health or safety of the public or which cause or have a natural tendency to cause injury or damage to business property. /sec. 59-13/.

V. Enforcement

A. Nuisance

The emission of dense smoke from the smoke stack of any locomotive, steamboat, steam tug, steam roller, steam derrick, steam pile driver, tar kettle or other similar machine or contrivance, or from any open fire or the chimney of any premises, except private residences, except for six minutes in any hour during which the firebox is being cleaned out or a new fire is being built, is declared a public nuisance and may be summarily abated. The owner of any locomotive, and the general manager, superintendent, yardmaster or officer of any railroad company having charge of any locomotive who shall cause or permit the emission of dense smoke from such locomotive shall be deemed guilty of creating a public nuisance. /sec. 59-14/.

B. Abatement

The Boiler, Elevator and Smoke Inspection Division shall have authority to abate the emission of dense smoke from the chimneys of buildings, locomotives, steam tugs and boats and various portable and stationary equipment used in construction work, and diesel automotive propelled trucks and buses. /sec. 59-16/.

C. Abatement Notice

On receipt of a report of any violation, the Smoke Inspector shall notify the responsible party to abate the nuisance. On report of a second violation, the Smoke Inspector, shall, prior to filing written charges in Municipal Court, send a 24 hour notice to abate the nuisance. /sec. 59-20/.

D. Records

The Smoke Inspector shall keep a record of all smoke observations on stacks and other smoke abatement work, which records shall be available for public inspection. /sec. 59-18/.

E. Right of Entry

The Smoke Inspector and his deputies shall have the right to enter at reasonable hours and when firemen are in charge, all premises under this Ordinance from which smoke is or has been emitted, or in which construction or alteration of apparatus connected with the stack, is going on. Any person who shall deny admittance to such inspector, after proper identification, or shall interfere with him in performance of his duties, shall be guilty of a misdemeanor, punishable by a fine of $2 to $50 for each offense. /sec. 59-17/.

F. Variances

This Ordinance does not apply to:

1. Agricultural operation in the growing of crops or the raising of animals.

2. Smoke from fires set by or permitted by the Fire Prevention Bureau if for the purpose of weed, abatement, the prevention of a fire hazard, or the instruction of public employees in fire fighting.

/sec. 59-19/.

G. Penalties

Violations are punishable by a fine of $25 to $100 and in default of payment, not more than 30 days imprisonment. Unlawful emissions from each stack is a separate offense. /sec. 59-21/.

VI. Preventive Programs

Construction or alteration of any smoke stack, chimney, stationary engine, boiler or similar machine or contrivance from which smoke is emitted, except private residences, shall not be done until application for a permit is made and a permit is issued. Such application shall include plans of any boiler, furnace or firebox to be used, with the dimensions of stacks and devices to be used for preventing emissions of air pollutants. /sec. 59-15/.

MIAMI BEACH, FLA.

I. Ordinance

Ordinance No. 1318, Sections 22.68 through 22.68.9 of the City Code, October 15, 1958.

II. General Statement

The Ordinance prohibits certain emissions of dense smoke, soot, cinders, noxious acids, fumes and gases; prohibits the use of certain fuel; and provides for the enforcement of the Ordinance and for the hearings and appeals.

III. Administrative Organization

Chief of the Fire Department, under the control of the City Council. /sec. 22.68.5/.

IV. Applicability

A. Sources /See IV-B/.

B. Specific Pollutants

1. Emission of smoke of equal or greater density than No. 2 Ringelmann is prohibited, except that smoke of a density greater than No. 2 Ringelmann may be emitted for a period of not to exceed 3 minutes in any 60 minutes when a firebox, furnace, or boiler or other fuel consuming device is being cleaned out and a new fire is being built therein, and this provision shall not apply to private residences in which no more than two families are or can be housed. /secs. 22.68.1, 22.68.2/.

2. Escape of such quantities of soot, cinders, obnoxious acids, fumes, and gases in such manner as to be detrimental to any person or to endanger the health, comfort and safety of any such person, or in such manner as to cause or have a tendency to cause injury or damage to property or business. /sec. 22.68.3/.

C. Fuel Standard

It is unlawful to use or to consume any fuel oil classified as Grade No. 6 by the American Petroleum Institute, and further defined by the American Society for Testing Materials, and commonly known as "Bunker C" oil or any grade inferior thereto, in any furnace, boiler or any other oil burning equipment, provided, however, that "Bunker C" oil may be so used or consumed if the oil burning equipment using or consuming the same shall be, during the period of such use or consumption and for such reasonable time immediately prior and subsequent to such use or consumption as may be determined by the Chief of the Fire Department, under the direct care, supervision and control of a duly qualified person thoroughly familiar with the theory and practice of the construction and operation of oil fuel consuming devices designed for and intended to be utilized for the use and consumption of "Bunker C" oil. /sec. 22.68.4/.

V. Enforcement

A. Nuisance

The emission of smoke, soot, cinders, obnoxious acids, fumes and gases in violation of the provisions of this Ordinance are declared to be a public nuisance and may be summarily abated by the Chief of the Fire Department. /secs. 22.68.1 and 22.68.3/.

B. Investigations

It is the duty of the Chief of the Fire Department to investigate complaints of violations, and to institute necessary proceedings in case of violations of this Ordinance.

C. Unlawful Conduct

Any person, firm or corporation interfering or impeding the performance of the duty of the Chief of the Fire Department or his employees and representatives in the performance of the duties enjoined in this Ordinance, shall be subject to the penalties provided for by Section 1.8 of the "Code of the City of Miami Beach, Florida, 1950."

D. Hearings

Any person aggrieved by any ruling rendered by the Chief of the Fire Department shall have the right to require him to conduct a full and complete hearing prior to actual and final decision. Such hearing shall afford the person aggrieved with a full opportunity to present any evidence which he may desire to support his position. It shall be the duty of the Chief of the Fire Department to promptly notify all parties concerned of his ruling in such hearings. /sec. 22.68.6/.

E. Procedure

Appeals may be made from the decision of the Chief of the Fire Department to the City Manager. On all appeals taken to the City Manager, appropriate hearings shall be held after due notice thereof, to all parties concerned. All records held by the Chief of the Fire Department shall be made available to the City Manager in each case. /sec. 22.68.7/.

F. Penalties

None, except a reference to penalties provided for elsewhere in the City Code only where there is interference with enforcement of this Ordinance cited in V., C above.

VI. Preventive Programs

It is the duty of the Chief of the Fire Department to prepare and disseminate appropriate educational and informative literature to the public for the purpose of advising them of the purposes and necessity for the smoke prevention campaign. /sec. 22.68.5 /c/ /.

ORLANDO, FLA.

I. Ordinance

Orlando City Code, sections 53.01 through 53.06 /Code 1948/ and section 39.184 /Code 1948/.

II. General Statement

An ordinance to regulate the emission of dense smoke within the city; to provide for the appointment of a smoke inspector; and to regulate the construction or alteration of fuel burning devices and accessory equipment.

III. Administrative Organization

A. Smoke Inspector shall be appointed annually by the Mayor, and confirmed by the city council. His duties shall include:

1. Enforcement of ordinance.
2. Inspection of all smoke emitting devices at least once each quarter, and upon complaints of violations.
3. Maintain a record of all acts in the discharge of his duties.
4. Issuance of permits for construction or alteration of fuel burning devices and accessory equipment. /secs. 53.04 to 53.06/.

IV. Applicability

A. Sources

Smokestack, chimney, engine, motor vehicles, boiler, stove, burner or other machine, appliance or contrivance on any premises, except prohibition shall not apply to private residences, not including apartment houses. /secs. 53.02 and 39.184/.

B. Specific Pollutants

1. Smoke

/a/ Of a density equal to or greater than No. 3 Ringelmann may not be discharged, except that emission of smoke for a period not exceeding ten minutes in any one hour to clean or build a new fire is not a violation. /sec. 53.02/.

/b/ Emitted from a motor vehicle which is annoying to the public prohibited. /sec. 39.184/.

V. Enforcement

A. Unlawful Conduct

1. To cause or permit the emission of dense smoke equal to or greater than No. 3 Ringelmann, except as provided. /sec. 53.02/.

2. To build or alter a fuel burning device or accessory equipment without a permit, or to build or alter such device or equipment not in conformity with plan approved by smoke inspector. /sec. 53.06/.

B. Penalties

None specified.

VI. Preventive Programs

A. Permits, Registration, Plan Approval

1. Any person who plans to construct or alter any smoke emitting device or accessory equipment, except for a private residence, shall make application in writing to the smoke inspector for a permit.

2. All applications for permits shall include a complete description of the proposed structure or alteration, including also plans and specifications, if the smoke inspector shall deem it necessary.

3. If the smoke inspector is satisfied the structure or alteration provides adequate means of controlling smoke, he shall issue a permit. /sec. 53.06/.

TAMPA, FLA.

I. Ordinance

City of Tampa. City of Tampa Code Chap. 32, Smoke.

II. General Statement

Ordinance provides for control of smoke through office of smoke inspector who is required to pass on applications for permits and make inspections. He has power to order sealing of equipment and conduct hearings. Appeal Board is created to hear appeals from orders of inspector. Ordinance imposes penalties by reference to another part of Code. Ordinance has definitions; "person" is defined to include any government corporation, department, bureau or agency.

III. Administrative Organization

A. Office of Smoke Inspector created. The boiler inspector shall perform duties of smoke inspector in addition to duties pertaining to office of boiler inspector. /sec. 32-2/.

1. He has duty to pass on all applications for permits provided for in ordinance /see VI/, to inspect all stacks, chimneys, locomotives, steam boats, stationary engines, boilers or other machines or contrivances from which smoke, fly ash, fumes or cinders are emitted, for the purpose of instructing the owners thereof in methods of smoke abatement. Inspector to keep records of his acts performed in discharge of his duties which are open to public, and he shall maintain file for information of public all communications coming to his office relating to smoke abatement and appliances. /sec. 32-3/.

2. Boiler inspector has duty to enforce ordinance. He and technical advisor accompanying him have right of entry into any premises at any reasonable time to inspect, observe, measure, sample, and test any equipment, process, material or product for purpose of administering, executing and enforcing ordinance. /sec. 32-11/.

IV. Applicability

A. Sources

/See IV B/.

B. Specific Pollutants

1. Emission of dense smoke, /defined in sec. 32-1 /k/ as smoke having a density equal to or greater than No. 2 Ringelmann/, from the smoke stack of any roller, derrick, railroad equipment, tar kettle, internal combustion engine, external combustion engine, open fire, smoke stack or chimney of any building, roundhouse, equipment or premises is prohibited and declared a nuisance. /sec. 32-6/.

   Such emission for period or periods aggregating not more than 9 minutes in any one hour at the time when firebox is being cleaned or a new fire is being built therein, or from the stack of any locomotive for a period in excess of one continuous minute after the locomotive is in or ready for service does not constitute a violation of above section. /sec. 32-7/.

2. Escape from any smoke stack or chimney of a quantity of soot, cinders or noxious gases which are equal to or greater in density than dense smoke, as defined, for a period or periods aggregating more than 6 minutes in any one hour, is prohibited and declared to be a public nuisance. /sec. 32-8/.

3. Emission into open air from any furnace, kiln or combustion device of a quantity of dust exceeding 0.35 grains per cubic foot of flue gas at stack temperature of 500 degrees Fahrenheit, when such stack gases do not contain more than 50 percent excess air, as measured by the Test Code /defined in sec. 32-1 /L/ as Test Code for Dust Separating Apparatus, 1941 Edition, published by A.S.M.E./ is prohibited and declared to be a public nuisance.

4. Escape or emission from any window or opening except a smoke stack or chimney, in any building from any equipment in the building, or the escape, emission, creation or generation from any equipment not enclosed by a building of soot, cinders, dust, or noxious gases, or combinations thereof, in such quantities as to be annoying to the community, detrimental to the health, comfort, convenience or well being of its inhabitants, is prohibited and declared to be a nuisance. The visibility of soot, cinders, dust, or gases arising from unenclosed machinery or escaping from any window or opening in any building, constitutes sufficient evidence to establish the existence of a nuisance. /sec. 32-10/.

5. Ringelmann Smoke Chart and Test Code made part of ordinance by reference. /sec. 32-18/.

V. Enforcement

A. Procedure

1. Sealing

When boiler inspector ascertains that ordinance is violated, he shall investigate facts and if he determines that violation has taken place and that it is probable that unless cause is corrected other violations will occur, he shall mail notice to alleged violator of his determination and his intention to make an order for the sealing of equipment or for the installation, repair or correction of equipment, or for such other remedy as will eliminate the cause of such violation and as will prevent further violations of the same nature. Such written notice must state time and place of a hearing to be conducted by the boiler inspector with respect to the violation and the proposed order; notice to be given at least 5 days before hearing and must inform violator of his right to be present, to be represented by counsel and present testimony or evidence as to the existence of violation or to the reasonableness of propriety of the proposed order. If violator or counsel or agent fail to appear, boiler inspector shall forthwith make the order and serve it upon the violator by registered mail. /sec. 32-12/.

After hearing, boiler inspector shall make order justified by all relevant factors for the protection of the health and property of the community, for elimination of violation and for prevention of future violations.

/a/ If he finds that violation has occurred and will probably recur and such recurrence will place community property or health in imminent danger of serious injury or substantial damage, he shall order the equipment causing the violation to be sealed, until it is adequately replaced, repaired or corrected, or until adequate additional equipment has been installed to prevent or eliminate further violations.

/b/ If he finds that a violation has occurred and will probably recur, but such recurrence will not place the community health or property in imminent danger of serious injury or substantial damage and the violator shall agree immediately to cause the equipment in violation to be replaced, repaired or corrected, or additional equipment to be installed to prevent or eliminate further violation of ordinance, then boiler inspector shall allow violator to continue operations for a period of time reasonably necessary for the replacement, repair, or correction of the equipment or for the installation of additional equipment.

/c/ If he finds that violation has occurred and will probably recur, and that there is no practicable means of preventing such recurrence, or that the violator is unwilling to comply with boiler inspector's directions for the prevention of such recurrence, then boiler inspector shall order the equipment causing violation permanently sealed and he shall seal the same.

A true and correct copy of order shall be served on violator by Registered Mail. /sec. 32-13/.

No equipment, machinery, structure, device, process, operation, property or premises sealed can be used or operated except by written authority of boiler inspector. /sec. 32-14/.

Person aggrieved by order of boiler inspector has right of appeal to Appeal Board, /composition of Board provided for in section 32-16/ within ten days of mailing of order of boiler inspector. Person may file appeal with boiler inspector, who must then transmit all records to Appeal Board. Appeal to Appeal Board does not operate as a stay of order of boiler inspector. Appeal Board to set time and place for appearance of aggrieved party, who may be represented by counsel, and produce evidence. After hearing, Appeal Board to make such decision as is justified by all relevant factors. Decision of Appeal Board final. Notice of decision to be given appealing party by Registered Mail. /sec. 32-15/.

2. Hearings, Generally

All hearings under ordinance are public; any person who may be affected or whose property may be affected by alleged violation or the decision, has right to be heard in person, or by counsel or agent. All records or exhibits pertaining to violations or hearings are public records. /sec. 32-17/.

B. Unlawful Conduct

Interference with smoke boiler inspector in performance of duties. /secs. 32-4, 32-11/.

C. Penalties

Persons owning, operating, or in charge of equipment, machinery, structure, device, process, operation, property or premises, causing violation of ordinance or order of boiler inspector or Appeal Board subject to penalties imposed in section 1-6 of Code.

VI. Preventive Programs

1. Permit

Person desiring to construct, or alter smoke stack, chimney, stationary engine, boiler, or other machine from which smoke, fly ash, fumes, or cinders are emitted, except private residences, shall first make written application to smoke inspector for a permit for such construction or alteration.

AUGUSTA, GA.

I. Ordinance

Ordinance No. 2183, April, 1952.

II. General Statement

An ordinance to prohibit the emission of dense smoke and the escape of soot, cinders, noxious acids, fumes and gases; to regulate the use of smokeless solid fuel; to regulate the construction, reconstruction, addition, alteration and repair of fuel consuming devices; and to provide penalties for its violation.

III. Administrative Organization

A. Superintendent of Smoke Prevention, with the assistance of employees of the Engineering Department. His duties shall be:

1. To investigate complaints and institute proceedings in case of violations.

2. To investigate and recommend revisions in this or other ordinances pertaining to air pollution.

3. To make annual inspections of all fuel consuming devices.

4. To prepare and disseminate to the public informative literature regarding the smoke prevention campaign, and to cooperate fully with civic and other organizations interested in it.

5. To promulgate rules and regulations under which this Ordinance will be administered.

6. To issue permits and notices provided for herein. /secs. 5,6,7/.

B. Board of Appeals of at least 3 members appointed by the Mayor to hear appeals from decisions of the Superintendent. /sec. 11/.

IV. Applicability

A. Sources /See IV, B/

B. Specific Pollutants

1. Smoke of a density equal to or greater than No. 2

Ringelmann from any source whatever is prohibited and declared to be a public nuisance, /sec. 2/, except:

/a/ Private residences in which no more than 2 families are or can be housed.

/b/ For a period not to exceed 6 minutes in any single 60-minute period when a firebox, furnace, boiler, locomotive, or other fuel consuming device is being cleaned out and a new fire is being built therein. /sec. 3/.

2. The escape of soot, cinders, noxious acids, fumes and gases in such quantity as to be detrimental to any person or to the public or to endanger the health, comfort and safety of any such person or of the public, or in such manner as to cause or have a tendency to cause injury or damage to property or business is prohibited and declared to be a public nuisance. /sec. 4/.

B. Volatility

Solid fuel, the volatile content of which is greater than 20 percent on a dry basis, shall not be used in any solid fuel-burning equipment, unless it meets the same standards in regard to smoke production as that of a fuel containing less than 20 percent volatile matter on a dry basis, to be determined by the Superintendent subject to the following conditions:

1. Submission of plans and specifications for the use of such fuel.
2. An adequate supply of the finished product for the conduct of whatever tests are deemed necessary.
3. Payment in advance, by the person whose product is submitted, of all expenses attendant on the tests.
4. Provided, however, that such fuels not meeting these conditions can be used on issuance of a permit by the Superintendent only in heating devices, previously approved, which are equipped with appliances constructed to insure complete combustion and designed to prevent air pollution.
5. The Superintendent is authorized to publish a list of smokeless fuels and statistics in reference to supply and prevailing prices. /sec. 8/.

V. Enforcement

A. Abatement

Created by emissions in violation of IV, B, above may be summarily abated by the Superintendent or his designee. /secs. 2,4/.

B. Unlawful Conduct

To interfere with the performance of duty of the Superintendent, his employees and representatives. /sec. 13/.

C. Inspections

Shall be made annually of all fuel consuming devices, and a certificate of inspection issued authorizing their continued operation provided they meet the standards herein established. Operation without such a certificate shall be a violation of this Ordinance. /sec. 10/.

D. Period of Grace

May be granted by the Superintendent for a period no longer than 6 months when he is satisfied that compliance herewith cannot be effectively and immediately had, provided the party in charge of the non-complying equipment has taken all steps necessary to insure compliance. /sec. 14/.

E. Procedure

1. Any person aggrieved by a ruling of the Superintendent shall have the right to require him to hold a full and complete hearing prior to final decision, at which the aggrieved shall have the opportunity to present evidence in support of his position. /sec. 11/.

2. Appeals from decisions of the Superintendent may be taken to the Board of Appeals, who shall conduct hearings after due notice to the parties concerned. /sec. 12/.

F. Penalties

Violators shall be fined not more than $100 for each violation, or imprisoned for not more than 90 days, or both, in the discretion of the Recorder. Each day's violation shall be deemed a separate offense. /sec. 17/.

VI. Preventive Programs

A. Permits

1. Required for the construction, reconstruction, addition,

alteration or repair of fuel-burning plants for producing power and/or heat, refuse-burning equipment, stacks or furnaces.

2. Plans and specifications shall be filed which enable the Superintendent to determine whether the proposed work will conform to the requirements of this Ordinance. If the work is not inconsistent with the purposes of this Ordinance, the Superintendent shall issue the permit. /sec. 9/.

FULTON COUNTY, GA.

I. Regulations

Board of Health Regulation No. 2 /Jan. 17, 1952/.

II. General Statement

The regulation prohibits nuisances, and specifies pollution of the air. The definition of person includes municipality.

III. Administrative Organization

Board of Health and Commissioner of Health.

IV. Applicability

A. Sources - none stated.

B. Specific Pollutants

Pollution of air by gases, vapors, fumes, mists, dusts, or smoke in quantities sufficient to be disagreeable, discomforting or detrimental to health and well being. /sec. 2/.

V. Enforcement

A. Nuisance - Pollution is declared to be a nuisance and is prohibited. /secs. 2, 3/.

B. Penalties - Violation of regulations is misdemeanor. Each violation is a separate offense. /sec. 4/.

VI. Preventive Programs

None.

CHICAGO, ILL.

I. Ordinance

Chapter 17, Municipal Code, May 1, 1959.

II. General Statement

An ordinance to regulate the production and emission of smoke, its constituent parts, fly ash, soot, cinders, toxic or radioactive substances, waste, noxious or obnoxious acids, fumes, oxides, gases, vapors, odors, dusts, particulate, solid, or liquid matter or any other materials that are of such character as to create atmospheric pollution from any stack, chimney, portable boiler, vehicle, process, open fires, or other source; to prohibit emissions of such substances beyond defined limits, to define a nuisance respecting the same and to provide special limitations or provisions for processes and equipment with respect to which feasible methods of measurement and control of emissions have yet to be developed; to establish a Department of Air Pollution Control; to provide for an Air Pollution Control Committee, a Technical Advisory Board, and an Appeal Board; to provide for permits for the installation, construction, reconstruction, addition to, alteration, repair, and use of fuel and refuse-burning plants, processes, equipment and devices, and smoke abatement, dust-arresting and air pollution control equipment or devices; to regulate the sale, use and consumption of certain solid fuels; to regulate the sale of equipment and devices; to provide for inspections and tests of fuel and refuse-burning equipment and devices, plants and processes and for the issuance of permits and certificates of operation; to regulate wind-borne sources of air pollution; to promote research of means and methods of more efficient fuel combustion and air pollution prevention; to promote an educational program, in cooperation with interested agencies, both public and private, for air purification; to provide for fines and penalties for violation of its provisions.

Definition of person includes government corporations, municipal corporations, city, county, municipality, district or other political subdivisions, departments, bureaus, agencies or instrumentalities of federal, state, or local government. /sec. 17-2.70/.

Definition of atmospheric pollution is the discharging from stacks, chimneys, exhausts, vents, ducts, openings, buildings, structures, premises, open fires, portable boilers, vehicles, processes, or any other source, of any smoke, soot, fly ash, dust, cinders, dirt, noxious or obnoxious acids, fumes, oxides, gases, vapors, odors, toxic or radioactive substances, waste, particulate, solid, liquid or gaseous matter, or any other materials in such place, manner or concentration as to cause injury, detriment, nuisance, or annoyance to the public, or to endanger the health, comfort, repose, safety or welfare of the public, or in such a manner as to cause or have a natural tendency to cause injury or damage to business or property. /sec. 17-2.9/.

III. Administrative Organization

A. Department of Air Pollution Control established.

B. Director of Air Pollution Control, appointed by the Mayor with the advice and consent of the City Council, an assistant Director of Air Pollution Control, appointed by the Director, and others. /secs. 17-3 through 17-12/.

The duties of the Director shall include: /sec. 17-13/.

1. Supervision of the execution of all laws, ordinances, rules and regulations as provided herein.
2. Institution of proceedings to prosecute violations.
3. Examination and approval of plans of equipment and devices.
4. Making inspections.
5. Investigation of complaints.
6. Encourage and conduct studies of air pollution and develop plans and proposals for joint investigations with other agencies.
7. Enlistment of cooperation of public and private groups.
8. Advising, consulting and cooperating with other governmental agencies in furthering air pollution control.
9. Issuance of permits, certificates and notices.
10. With the advice and consent of the Advisory Board, to

/a/ Make rules and regulations.

/b/ Publish a Code of Recommended Practices.

/c/ Establish standards of quality.

/d/ Determine a specified volume ratio, or other suitable index, of particulate bearing gas for various types of equipment.

/e/ To establish standards of limitations on the emission of acids, fumes, oxides, gases, vapors, odors, dusts, radioactive substances, waste or other solid, liquid or gaseous matter which in specified concentrations in the atmosphere may be or become noxious, obnoxious, or toxic.

However, none of the above shall be enacted until he has held a public hearing thereon, after at least 10 day's public notice, at which interested parties may appear. His recommendations shall become effective and be incorporated herein by reference, if and when the City Council approves them by ordinance.

C. Air Pollution Control Committee of 9 members, appointed by the Mayor, who shall: /secs. 17-15, 17-17/.

1. Aid and advise the Director in obtaining the support and cooperation of private and public organizations interested in or affected by this chapter.

2. Advise and consult with the Director respecting amendments hereto.

3. Advise and consult with the Director respecting membership on the Advisory Board.

4. Institute, support and encourage air pollution research programs, and raise and administer funds therefor.

D. Technical Advisory Board of 7 members, appointed by the Mayor, to /sec. 17-19/.

1. Aid the Director in promulgating the Code of Recommended Practices.

2. Advise the Director and the Appeal Board respecting technical points concerned with enforcing this chapter.

E. Appeal Board of 7 members, appointed by the Mayor, to decide appeals from any decision, ruling, regulation, determination or order of the Director, and to pass on applications for extensions of time for compliance, or for exemptions or variances. /sec. 17-20/.

IV. Applicability

A. Sources

1. Fuel-burning, combustion or process equipment or devices, portable boilers, railroad locomotives, open fires, cupolas, furnaces, steamships and other vehicles /see standards under Specific Pollutants, below/.

2. Open fires for the burning of rubbish, refuse, grass, wood, garbage, or any other material are prohibited, subject to limitations elsewhere herein, rules of the Fire Commissioner, and fire prevention and zoning laws, ordinances and regulations. /sec. 17-30/.

3. No paper, wood or other combustible refuse, waste, or other material resulting from the construction, alteration, demolition or wrecking of any building, structure or equipment shall be burned in any open fire, except upon application for and issuance of a permit therefor by the Fire Commissioner, who shall immediately forward a copy thereof to the Director, and subject to the limitations described in 2 above. /sec. 17-31/.

4. Internal combustion engines of any motor vehicle, boat, tug or other vehicle, except aircraft at municipal airports, shall not, while stationary or moving, emit any unreasonable and excessive smoke, obnoxious or noxious gases, fumes, or vapor. /sec. 17-32/.

5. Materials susceptible to becoming wind-borne shall not be handled, loaded, stored, transferred, transported, placed, deposited, thrown, discarded, or scattered without reasonable precautions or measures having been taken to minimize atmospheric pollution /sec. 17-33/; nor shall any building, structure, or premises, open area, right of way, storage pile, yard, vessel or vehicle, or construction, alteration, building, demolition, or wrecking involving such material be operated or maintained without the taking of such precautions. /sec. 17-34/.

6. "No person shall maintain or conduct, or cause to be maintained or conducted, any parking lot or automobile and/or truck sales lot, or use any real property for a private roadway unless such real property is covered or treated with a surface or substance or otherwise maintained in such manner as to minimize atmospheric pollution." /sec. 17-37/.

7. Classification of fuel-burning, combustion and process equipment: /sec. 17-22/.

Class I - open fires, except those caused by the burning of debris resulting from the construction, alteration, demolition or wrecking of any building, structure, or equipment, diesel motor vehicles, and all fuel-burning combustion or process equipment or devices which produce steam, hot water, or warm air for use primarily in any domestic heating plant or in any heating plant other than domestic, or incinerators, constructed and installed, or reconstructed at a cost in excess of 50 percent of the total replacement cost of the equipment or devices involved, subsequent to the effective date of this chapter, but excluding any such equipment for which an installation permit was issued prior to such date.

Class II - All fuel-burning, combustion or process equipment or devices which produce steam, hot water, or warm air for use primarily in any domestic heating plant, or in any heating plant other than domestic, or incinerators, and which are not included in Class I.

The smoke emission limits set forth in B-1 below for Class I shall be applied to Class II within 5 years from the effective date of this chapter.

Class III - All other fuel-burning, combustion or process equipment or devices constructed and installed, or reconstructed at a cost in excess of 50 percent of the total replacement cost of the equipment or devices involved, subsequent to the effective date of this chapter, but excluding any such equipment for which an installation permit was issued prior to such date.

Class IV - All fuel-burning, combustion or process equipment or devices other than those included within Classes I, II, or III, and open fires caused by the burning of debris resulting from the construction, alteration, demolition or wrecking of any building, structure or equipment.

The smoke emission limits set forth in B-1 below for Class III shall be applied to Class IV within 10 years from the effective date of this chapter.

B. Specific Pollutants

1. Smoke Emission Maxima /sec. 17-23/.

	Smoke /Ringelmann No./	Class I	Class II	Class III	Class IV
		Minutes Per 60 Minutes			
Normal Operation	4.5	0	0	0	0
	3	0	0	2	6
	2	8	8	12	25
	1	60	60	60	60
*Units per 60 min.		60	68	76	97
Building new, banking and cleaning fires, soot blowing, and process purging	4.5	0	0	0	0
	3	4	6	6	6
	2	8	12	40	60
	1	60	60	60	60
*Units per 60 min.		72	84	112	126

	Frequency			
Building new fires, cleaning or banking fires, soot blowing or process purging	Once Daily 1 time/ 6 hr.	Once Daily 1 time/ 6 hr.	No. Spec. 1 time/ 2 hr.	No. Spec. 2 times/ 2 hr.

*Smoke unit is smoke density /Ringelmann No./ times emission time in minutes for purposes of this calculation, a Ringelmann density reading shall be made at least once every minute during the period of observation.

2. Smoke Emission Limited for Particular Operations /sec. 17-25/.

/a/ Railroad Locomotives-Steam

/1/ When a firebox is cleaned or a new fire built in locomotives, smoke of a density greater than No. 2 Ringelmann shall be prohibited except that No. 3 smoke shall be allowed for periods aggregating not more than 4 minutes in any 60 minute period.

/2/ After a yard or switching locomotive is in service or ready for service, smoke of a density greater than No. 2 Ringelmann shall be prohibited except that No. 3

smoke shall be allowed for periods aggregating not more than 1 minute in any 15 minute period.

/3/ After a road or transfer locomotive is in service or ready for service, smoke of a density greater than No. 2 Ringelmann shall be prohibited except that No. 3 smoke shall be allowed for periods aggregating not more than 2 minutes in any 15 minute period.

/b/ Railroad Locomotives-Diesel

/1/ Immediately after starting the engine of a diesel locomotive, smoke of a density greater than No. 2 Ringelmann shall be prohibited except that No. 3 smoke shall be allowed for periods aggregating not more than 4 minutes during the first 15 minute period.

/2/ Immediately after starting the steam generator on a diesel locomotive, smoke of a density greater than No. 2 Ringelmann shall be prohibited except that No. 3 smoke shall be allowed for periods aggregating not more than 2 minutes but not thereafter.

/3/ After a diesel yard or switching locomotive is in service or ready for service, smoke of a density greater than No. 2 Ringelmann shall be prohibited except that No. 3 smoke shall be allowed for periods aggregating not more than 1 minute in any 15 minute period.

/c/ Heating and Reheating Furnaces

/1/ Where smoke is an essential part of the treatment process, heating and reheating furnaces shall be so operated that smoke of a density greater than No. 2 Ringelmann shall be prohibited except that No. 3 smoke shall be allowed for periods aggregating not more than 6 minutes in any 60 minute period.

/2/ Where smoke is not an essential part of the treatment process, the provisions of the table in B-1 above shall apply.

/d/ Air Furnaces

/1/ Air furnaces shall be so operated that smoke of a density greater than No. 2 Ringelmann shall be prohibited except that No. 3 smoke shall be allowed for periods aggregating not more than 6 minutes in any 60 minute period.

/e/ Steamships and Other Vessels

/1/ When building, banking or cleaning fires or when maneuvering or ballasting, smoke of a density greater than No. 2 Ringelmann shall be prohibited except that No. 3 smoke shall be allowed for periods aggregating not more than 6 minutes in any 60 minute period.

/2/ When building original fires at the start of seasonal operations, or under emergency conditions when it is necessary to operate a boat with a fluctuating load upon the boilers to prevent danger to life and/or property, the above restrictions shall not apply.

/3/ Otherwise, when a steamship or other vessel is in service, the provisions of the table in B-1 above shall apply.

3. Particulate Matter Emissions

Applicable to fuel-burning, combustion or process equipment or devices, and portable boilers. /sec. 17-24/.

/a/ The basic limitation on the average emission into the atmosphere of particulate matter from any single such source of emission shall be 0.35 grains per cubic foot of gas measured at a temperature of 60 degrees F. and a pressure of 30 inches of mercury, under steady conditions, provided that for emissions at levels 100 feet or more above grade, the basic limitation shall be increased by the amount of particulate matter of less than 10 microns in size, if any, up to a maximum increase of 0.03 /H/100/2 grains per scf, where H is the height of discharge in feet above grade.

/b/ The limitation on the emission of that portion of the particulate matter which is 44 microns in size or larger from any single such source shall be 0.21 grains, per square foot. These requirements and those in /a/ above, shall be measured according to the Tentative Code for dust separating apparatus of the A.S.M.E.

/c/ A specified volume ratio, or other suitable index, of particulate bearing gas shall be established in accordance with III A 10 above for various pieces, types or classes of fuel-burning, combustion or process equipment or devices, which constitute potential sources of emission of particulate matter; provided, however, that with respect to coal burning combustion equipment, the basic limitations set forth in /a/ above, shall be adjusted to a gas volume based upon 50 percent excess air.

/d/ All existing coal burning combustion equipment shall meet the limitations in /a/, /b/, and /c/ above within 5 years from the effective date of this chapter.

/e/ Until such time as definitive standards are established and/or are applicable, emissions of particulate matter from all fuel-burning, combustion or process equipment or devices, shall not exceed emissions which would result from operations in accordance with existing normal good operating practice.

/f/ Cupolas /sec. 17-25/.

/1/ Shall be equipped with gas cleaning devices and/or so operated as to reduce the content of particulate matter emitted into the atmosphere to not more than 0.50 grains per standard cubic foot of gas, based on on stack gas volume corrected to 60 degrees F. and 30 inches of mercury.

/2/ Contracted for, under construction or in operation prior to the adoption of this chapter, shall comply with the provisions of /a/ above, within 10 years from the date of such adoption.

C. Volatility

1. A solid fuel, the volatile content of which is 23 percent or less on an ash and moisture-free basis, is a low volatile solid fuel within the meaning of this chapter, and the use of any other solid fuel in a surface burning type /hand-fired/ of combustion equipment is unlawful unless:

/a/ The Director has issued a Certificate of Operation therefor.

/b/ The Director has approved the equipment or type of equipment.

/c/ The Director has issued an allowable Fuel Certificate.

/d/ The Appeal Board has granted an individual variance for such equipment.

The foregoing restrictions shall not apply with respect to the burning of combustible refuse in such equipment in accordance with rules and regulations issued by the Director. /sec. 17-38/.

2. A solid fuel containing volatile matter in excess of 23 percent on an ash and moisture-free basis shall be considered a low volatile solid fuel provided it meets the same standards in regard to smoke production as a low volatile solid fuel, and subject to the following conditions in order to ascertain whether or not such standards are met.

   Adequate supplier of such solid fuel shall be made available to the Director to conduct such reasonable tests as he shall deem necessary to determine that such fuel meets the standards hereinbefore established, the reasonable expense for which shall be borne by the person seeking approval for the fuel.

   The Director shall maintain a list of approval fuels, and furnish it on request. /sec. 17-39/.

3. Solid fuel, other than low volatile solid fuel, may be used or consumed only in mechanical combustion equipment or mechanically fired apparatus; except that after suitable inspections and tests have proven to the Director that any combination of surface burning, type /hand-fired/ of equipment and appurtenances and fuel can comply with the emission limitations established by or under this chapter, the Director shall approve the use of such combination of equipment and fuel. /sec. 17-40/.

V. Enforcement

A. Nuisance

Any emission of smoke, particulate matter or other matter in excess of the limitations in IV B 1, 2, and 3 above, is declared to be a public nuisance and may be summarily abated by the Director, who is further empowered to institute legal proceedings for the abatement of emissions of smoke, particulate matter or other matter which causes injury, detriment, nuisance or annoyance to the public or endanger the health, comfort, safety or welfare of the public, or causes or has a natural tendency to cause injury or damage to business or property. /sec. 17-27/. The Director may also summarily abate wind-borne nuisances. /sec. 17-35/.

B. Unlawful Conduct

1. Knowingly to sell, exchange, deliver, haul or transport to the ultimate consumer for use and consumption in any surface burning type of equipment, any solid fuel which does not meet the standards of a low volatile

solid fuel, or which has not been approved for use with such equipment by issuance of an Allowable Fuel Certificate or a Certificate of Operation; provided, that delivery, or transportation of solid fuel by railroad companies and other common carriers, in the course of their common carrier business, shall not be a violation. /sec. 17-45/.

2. To sell, exchange, deliver or install any make, model or type of domestic refuse-burning equipment, which has not been approved by the Director, or for the burning of any type of refuse other than the types for which the equipment has been approved /common carriers again exempted/. /sec. 17-46/.

3. To install, erect, construct, reconstruct, alter, or add to fuel-burning, combustion or process equipment, or stacks and chimneys or to undertake major repairs to a high pressure boiler or its brickwork without having obtained the required permit. /sec. 17-57/.

4. To use or operate any fuel-burning, combustion or process equipment subject to annual inspection without an effective certificate of operation. /sec. 17-62/.

5. To break the seal on any equipment sealed at the order of the Director without his written authorization to do so. /sec. 17-77/.

C. Inspection

Shall be made annually of all fuel-burning, combustion or process equipment covered by this chapter, except locomotives, ships, boats, tugs, internal combustion engines, domestic heating plants, or domestic refuse-burning equipment. Any equipment inspected in connection with an installation permit, and which has been in operation less than six months, need not be inspected again until six months from the date it was first put under fire. /sec. 17-60/.

This requirement applies as well to equipment owned or operated by any branch of the federal, state or local governments, and municipal corporations, though all fees are waived. /sec. 17-63/.

For the purpose of making such inspections, and otherwise enforcing this chapter, the Director and his authorized agents shall have the right of entry at reasonable hours, refusal of which may warrant denial or revocation of the certificate or permit for any equipment in connection with which entry was sought. /sec. 17-78/.

D. Sealing

Upon notice and hearing, the Director may seal any fuel-burning, combustion or process equipment:

1. If work for which an installation permit is required is begun prior to obtaining such permit, or if work done does not comply with the permit, or if work done does not comply with the permit issued, or the plans and specifications filed in connection therewith. /sec. 17-56/.
2. If, after previous notification of three or more violations of this chapter within 12 consecutive months, the alleged violator has not shown cause why the offending equipment should not be sealed at a hearing before the Director, scheduled not less than 20 days from the date of notice thereof, at which hearing he may appear personally or by representative, with or without counsel. /sec. 17-75/.
3. If a certificate of operation is refused on any inspection because the person required to procure it has not complied with the provisions of this chapter. /sec. 17-76/.
4. In the case of movable equipment, or portable boilers or vehicles, when immediate correction of a violative condition is not made by the operator when ordered to do so by the Director or his authorized representative. /sec. 17-76/.

E. Variances

May be granted by the Appeal Board for any fuel-burning, combustion or process equipment, when it is demonstrated that because of conditions beyond control, compliance with this or other ordinances related to atmospheric pollution will result in an arbitrary and unreasonable taking of property or in the practical closing and elimination of any lawful business, occupation or activity, in either case without a sufficient corresponding benefit or advantage to the people in the reduction of atmospheric pollution; in such case, there shall be prescribed other and different requirements not more onerous, applicable to plants or equipment involved. /sec. 17-74/.

F. Period of Grace; Immunity from Prosecution

1. Upon complaint in writing that it is impossible to operate any plant, fuel-burning, combustion or process

equipment in complete compliance with the requirements of this chapter, presenting evidence satisfactory to the Director that all steps necessary for future compliance have been or will be taken, and assuring him that the acquisition and installation of proper equipment will be effected within a reasonable time, stating specifically the nature and extent thereof, and upon the finding by the Director that the complaint is well grounded, he may permit the operation of the equipment in question for a reasonable time within which the necessary equipment is to be acquired and installed; provided, however, that the Director is empowered to grant further reasonable extensions of time upon proof of extenuating circumstances, and that an order of the Director denying a complaint for a period of grace or an extension of time shall be subject to review by the Appeal Board. /sec. 17-73/.

2. In the event of unavoidable failure or breakdown of equipment, or other circumstances beyond the control of the owner or operator, including necessary shut-downs of smoke abatement or dust collection equipment, which tends to produce unlawful emissions of smoke, particulate, or other matter, the Department shall be immediately notified thereof, with a statement of all pertinent facts, and the date on which the condition will be rectified. It shall also be notified on the removal of the defect. Immunity from prosecution under such circumstances shall be at the discretion of the Director. /sec. 17-71/.

G. Procedure

1. If, at the time of any original inspection, or annual inspection, or any other inspection, it is found that any fuel-burning, combustion or process equipment or device, or premises, is being operated or managed, or is in such a condition or so installed that smoke, particulate or other matter is being emitted, or may be emitted therefrom, in violation of any emission limitation, or other requirement or jurisdiction provided in this chapter, the Director shall give notice in writing to any or all persons owning, operating, or in charge of such equipment or device, or premises, of the defective equipment or device, condition or operation or violation. ... Such notice may direct the alleged violator to appear and to present such notice at a designated office of the Department ... at the date and hour specified thereon, for the purpose of conferring with respect to the alleged violation and the corrective measures, if any, which should be taken.

Such notice may contain a demand upon such person or persons to discontinue use of such equipment or device, or premises, until the correction thereof has been approved by the Director. Such notice shall allow up to 10 day's time to correct the equipment or device, or condition or operation, and report compliance to the Director.

Failure to comply with such notice within 10 days from its date, or within any extension of time granted under /F 1 above/, shall be a violation of this section and, upon such failure, the Director may revoke any existing certificate of operation for such equipment or device. /sec. 17-36/.

2. Appeals

May be taken from any decision, ruling, requirement, rule, regulation, order, or failure to act upon request within a reasonable period of the Director within 30 days after receiving notice thereof, by filing with the Director a notice of appeal directed to the Appeal Board, specifying the grounds thereof, and the relief prayed for. The Appeal Board, not less than 5 nor more than 10 days thereafter, shall set a date for a hearing and mail notices thereof to interested parties, who may appear in person or by agent or attorney. The Board may grant continuances and such appeal shall stay the ruling appealed from. The decision of the Appeal Board shall be binding on the Director. Transcripts of the record shall be furnished for a fee. /sec. 17-21/.

H. Penalties

Any person violating this chapter shall, upon conviction, be punished by a fine of not less than $10 nor more than $200 for the first offense, and not less than $50 nor more than $200 for the second and each subsequent offense, in any ninety day period.

Each day's violation is deemed a separate offense. Permits and operating certificates may be suspended or revoked in addition to such fines and penalties. /sec. 17-79/.

VI. Preventive Programs

A. Permits, Certificates, etc.

1. Allowable Fuel Certificates, identifying the equipment, its major components, and the approved solid-fuel-volatility, may be issued by the Director for surface

burning types /hand-fired/ of equipment, provided that with respect to equipment subject to annual inspection, he may issue a Certificate of Operation in lieu thereof. For purposes of determining that surface-burning types are suitable for solid fuel other than low volatile solid fuel:

/a/ The Director shall have authority to test each new type of equipment. Where he finds that such equipment is so designed that it will burn any solid fuel of any, or a specified, volatile content without exceeding the emission limitations established herein, he shall issue an Allowable Fuel Certificate for the type of equipment tested, and authorize its tagging as provided below.

/b/ Any equipment so approved that is sold, offered for sale, exchanged, delivered or installed, shall bear a certificate or a plate or tag identifying the equipment and the category for which it is approved. /secs. 17-41, 42, 43, 44/.

B. Tags, Plates, etc.

Domestic refuse-burning equipment shall be submitted to such tests of its air pollution potential, as the Department may deem necessary. Each type approved shall be designated Type A-domestic burning equipment for ordinary paper or similar material only, or Type B-domestic incinerators for burning rubbish and garbage. Any approved domestic refuse-burning equipment that is sold, offered for sale, exchanged, delivered or installed shall bear a plate or tag identifying it and the category for which it is approved. /sec. 17-47/.

C. Tests

The Director may make such tests as he deems necessary if there is evidence that any fuel-burning, combustion or process equipment is exceeding any emission limitation. Tests and measurements shall be made under the direction of a competent engineer, in accordance with A.S.M.E. "Power Test Codes, Test Code for Dust Separation Apparatus, PTC-21-1941." Costs shall be borne by the person responsible for the equipment when the tests reveal an unlawful emission; otherwise, they shall be charged to the Department. /sec. 17-72/.

D. Installation Permits

1. Required for /sec. 17-48/.

/a/ Installation, erection, construction, reconstruction, and alteration of, or addition to, any fuel-burning, combustion or process equipment or device, or any equipment pertaining thereto, or any stack or chimney connected therewith, except domestic heating plants, domestic refuse-burning equipment, locomotives, steamships, and internal combustion engines.

/b/ Major repairs to any high-pressure boiler furnace or the brickwork on or about it.

/c/ Excepting minor repairs or alterations which do not change the capacity or method of combustion, or materials affect the emission of products of combustion, and emergency repairs, provided application for a permit is made within a reasonable time after the work is started.

2. Plans and specifications shall be prepared under the direction of a registered professional engineer and bear his seal /sec. 17-50/ and shall show /sec. 17-49/:

/a/ The type of installation.

/b/ The form and dimensions of the equipment.

/c/ Description and dimensions of its proposed location.

/d/ The amount of work and heating to be done.

/e/ Provisions made for securing complete combustion of fuel or refuse and manner of burning.

/f/ Character of fuel or refuse to be burned and maximum quantity to be burned per hour.

/g/ Adequacy of ventilation in the equipment room.

/h/ Location and dimensions of all stacks immediately adjoining and contiguous to the premises.

/i/ Frequency and duration of emissions.

/j/ Composition of effluents and range of collector efficiency.

3. Issuance of permit /sec. 17-52/.

/a/ Applications shall be approved or rejected within ten days of filing.

/b/ Issuance may be conditioned on the permitee's agreement to operate the equipment only with fuels of a specified volatile content or only in a specified manner.

4. Secret Process /sec. 17-53/.

/a/ The requirement of filing plans and specifications is suspended when the equipment in question is to be used in or become part of a secret process, upon filing of an affidavit to that effect.

/b/ Proof of financial responsibility may be required, and such suspension does not relieve the persons responsible from compliance with this chapter.

5. Proof of Responsibility /sec. 17-54/.

May be required as a condition precedent to the issuance of an installation permit or Certificate of Operation when the applicant's plans and specifications are incomplete because of the untried or confidential nature of the equipment.

In the absence of such proof, the applicant may be required to file a surety bond not to exceed $50,000.

6. The permit shall become void if the work authorized is not begun within one year from the date of issuance, or any extended period allowed by the Director. /sec. 17-58/.

7. Discontinuance or dismantlement of any equipment covered by a permit shall be reported to the Department within 30 days thereof. /sec. 17-59/.

E. Certificate of Operation

Shall be issued by the Director upon completion of any work for which an installation permit was issued if, upon inspection, it is found that such work conforms to the plans and specifications /sec. 17-55/, and for any equipment found, on original, annual or subsequent inspection to comply with the provisions of this chapter. It shall be posted in a conspicuous place at or near the equipment or process. /sec. 17-61/.

F. Education and Research

1. It shall be the duty of the Director to collect, publish and disseminate appropriate educational literature and other information to the public for the purpose of advising of the necessity, purpose

and methods for smoke control and air pollution prevention and securing cooperation in the reduction of emission of smoke and other air pollutants. /sec. 17-13.10/.

2. To effectuate the policy of constantly maintaining and improving air pollution control practices, the Director and the Air Pollution Control Committee shall appoint sub-committees to conduct research programs on, among others:

/a/ Emissions from metallurgical process.

/b/ Emissions from by-product coke plants.

/c/ Emissions from locomotives and steamships.

/d/ Wind-borne dust and particulate matter.

/e/ Exhaust emissions from motor vehicles.

/f/ Design and operation of and emissions from incinerators.

/g/ Emissions of noxious gases, fumes and odors.

Annual reports of findings and recommendations shall be made to the Director and the Committee. /sec. 17-18/.

3. Research shall be conducted to determine feasible methods of measuring and controlling smoke and particulate matter emissions from blast furnaces and auxiliary equipment, by-product coke plants, open-hearth furnaces, sintering plants, Bessemer Converters and pneumatic steelmaking processes, electric furnaces, non-ferrous foundaries, dryers, kilns, and roasters.

Until definitive standards are established, the above listed process and type of equipment shall not exceed emissions which would result from operations in accordance with existing normal good operating practice. /sec. 17-26/.

DECATUR, ILL.

I. Ordinance

Municipal Ordinance, Chapter 50, Section II.

II. General Statement

Ordinance declares emission of smoke except within specified period, to be a nuisance and provides penalties.

III. Administrative Organization

Director of Public Health given power to abate nuisances summarily.

IV. Applicability

A. Sources /see IV B/.

B. Specific Pollutants

Unlawful for person owning or in charge of smoke stack of any locomotive, tar kettle, steam engine, or any contrivance, or of any open fire, smoke stack or chimney of any building or premises to allow emission of dense smoke, except for period or periods aggregating 6 minutes in any one hour at the time fire box is being cleaned out or new fire is being built therein.

V. Enforcement

A. Nuisance

Emission of smoke declared to be nuisance which may be summarily abated by Director of Public Health. Such abatement is in addition to fines provided.

B. Penalties

Violation of ordinance leads to fine of not less than $5.00 nor more than $200 for each offense. Each day of violation is separate offense.

EVANSVILLE, IND.

I. Ordinance

Ordinance No. 1896, 5 December 1949.

II. General Statement

An ordinance declaring the emission of dense smoke from any fuel-burning equipment, premises, open fire, railroad locomotive or vehicle a public nuisance; providing for the licensing of and granting of permits for the construction, installation or alteration of fuel-burning equipment; providing regulations for such equipment; and providing penalties for violations.

III. Administrative Organization /secs. 1, 2/.

A. Commission of Smoke Regulation and Inspection under the Board of Public Works, headed by a Commissioner of Smoke Regulation appointed by the Mayor.

B. Advisory Board of 12 members appointed by the Mayor.

IV. Applicability

A. Sources

1. Equipment using solid fuels. /sec. 8a/.

/a/ Low pressure boilers shall be sized in accordance with the recommendations of the American Society of Heating Ventilating Engineers Guide and Heating, Piping and Air Conditioning Contractors National Association.

/b/ Power or heating boilers with more than 120 sq. ft. of heating surface shall, if fired with coal, be provided with mechanical stokers.

/c/ The size and setting height of stokers in low pressure heating boilers may not be less than that recommended by the Stoker Manufacturers Association Manual.

/d/ Horizontal Return Tubular Boilers shall be set so that the minimum distance from the bottom of the shell to the stoker iron work nearest the shell shall be no less than that set forth in the accompanying table. The rate of coal feed for stokers on Horizontal Return Tubular Boilers and all other fire tube boilers operated above 15 lbs./sq. in. gage shall be based on 150 percent of the rated horsepower. The grate area shall be in accordance with the manufacturer's recommendations but in no case shall the burning rate exceed 35 lbs./sq. ft./hr. unless otherwise specified by the Commissioner.

2. Equipment burning oil. /sec. 8b/.

   All oil burners, or burners installed in new or existing boilers shall have a capacity not less than that recommended by the manufacturer for the services intended. The setting height and design of the combustion chamber shall be in accordance with the manufacturer's recommendations, subject to the Commissioner's approval.

3. Equipment burning gas. /sec. 8c/.

   All gas-burning equipment installed shall be approved by the Commissioner as to capacity and design.

4. Chimneys. /sec. 8d/.

   Chimneys shall be no less in area or height than that recommended by the boiler manufacturer. If no recommendations are available, the chimney shall be of such area and height as to create a draft of not less than 0.1 in. of water in the furnace of forced draft stoker fired boilers, and negative pressures in all parts of the boiler settings.

5. Installations not covered by the above will be passed upon individually by the Commissioner. /sec. 8c/.

B. Specific Pollutants

Smoke of a density greater than No. 2 Ringelmann is declared a nuisance and is prohibited, except

1. For periods aggregating six minutes in any 1 hour during which a firebox is being cleaned or a fire built.

2. For a period, mutually agreed upon by the Commissioner and the person subject to this ordinance, in each 8 hr. period as is necessary for blowing out flues. /sec. 4/.

V. Enforcement

A. Procedure /sec. 10/.

1. Appeals

May be taken from any decision of the Commissioner of Buildings or the Commissioner of Smoke Regulation to the Advisory Board within 5 days of the decision complained of.

Shall be in writing, to be considered within 5 days at a meeting at which the appellant may appear personally or by agent or counsel. The Advisory Board shall make written recommendations to the Board of Public Works which shall render the final decision.

B. Penalties

1. For the emission of unlawful smoke, a fine of not less than $10 nor more than $100 for each offense. /sec. 4/.
2. Abatement of the nuisance. /sec. 4/.
3. For failure to secure the required permit, a fine of not more than $300 to which may be added imprisonment for not more than 180 days. Each day's violation is deemed a separate offense. /sec. 5/.
4. For operating without the required certificate, a fine of not more than $300 to which may be added imprisonment for not more than 180 days. Each day's violation is deemed a separate offense. /sec. 6/.

VI. Preventive Programs

A. Permits /sec. 5/.

1. Required for the construction, installation, reconstruction and alteration of furnaces, boiler furnaces, fuel-burning equipment, portable apparatus, chimneys and stacks, except in buildings used exclusively for private residences containing less than 3 dwelling units.
2. Plans and specifications shall be filed with the Commissioner of Smoke Regulation and the Commissioner of Buildings. The latter shall approve them and issue the permit, or set out in detail his reasons for rejecting them. They shall show:

/a/ the type of installation.

/b/ the amount of work and heating to be done by the plant.

/c/ provisions for securing suitable combustion conditions for preventing smoke.

/d/ type of fuel to be used.

/e/ dimensions and ventilation of the room which will house the plant.

/f/ location and dimensions of chimneys and stacks.

3. Applications shall be acted on not more than 10 days after they have been filed and the fee paid.

B. Certificate of Operation. /sec. 6/.

1. Required for all new or reconstructed plants, except buildings used exclusively for private residences containing less than 3 dwelling units.

2. To be issued by Building Commissioner.

FORT WAYNE, IND.

I. Ordinance

Fort Wayne, General Ordinance No. 2325, May 14, 1949.

II. General Statement

An Ordinance declaring the emission of dense smoke, or foul noxious fumes and gases, or ash, dust, soot, or cinders to be a nuisance defining dense smoke, providing penalties for violation, and for the abatement of said nuisances, and creating a Smoke Abatement Commission and the employment of a Smoke Inspector.

III. Administrative Organization

A. Smoke Abatement Commission of the Department of Public Safety. /sec. 7/.

B. Membership

1. Building Commissioner, Chairman.

2. Chairman of Board of Safety.

3. Three members appointed by Mayor. No more than two to be of same political party.

To serve without pay. /sec. 7/.

C. Powers and Duties of Commission

To make such reasonable rules and regulations as it deems advisable. The Commission may hire a Smoke Inspector at such salary as shall be fixed by ordinance and shall furnish him equipment for making inspections and tests for the enforcement of the Ordinance. /sec. 7/.

D. Enforcement Officer

Smoke Inspector shall examine and inspect emissions of prohibited effluvia. IV B. /sec. 8/.

IV. Applicability

A. Sources

1. The emission of dense smoke from any chimney or smoke stack of any building, derrick, pile driver, or any other machine or contrivance or tar kettle, kiln, or open fire. This section shall not apply to private

residences nor to emissions for a period or periods aggregating not more than 6 minutes in any one hour except when a new fire is being built, or the fire grates or fire pots are being cleaned or the smoke is due to a reasonably unavoidable breakdown of equipment. /sec. 3/.

2. The emission of dense smoke by any locomotive, either standing or in motion, for more than one minute in any fifteen minute period shall be a violation; except that this section shall not apply when a new fire is being built or the fire grates or fire pots are being cleaned or the smoke is due to a reasonably unavoidable breakdown of equipment. /sec. 4/.

3. It shall be unlawful to permit any furnace fired by overfeed or spreader stokers or pulverized coal burners or any similar devices to release heat in excess of thirty thousand /30,000/ B.T.U. per cubic ft. per hour unless such furnace is equipped with an improved fly ash collector and such releases of heat do not exceed 60,000 B.T.U. per cubic ft. per hour. /sec. 6/.

B. Specific Pollutants

Emissions of foul or noxious gases or fumes, or ash, dust, soot or cinders and smoke of a density greater than No. 2 Ringelmann except as permitted under IV A and which cause injury or annoyance to the public or damage to any property or have a natural tendency to do so, shall be nuisances subject to abatement. /sec. 3, 4/.

V. Enforcement

A. Abatement

Whenever the Smoke Inspector finds a violation of this Ordinance the following procedure shall go into effect:

1. The Smoke Inspector will notify the violators in writing to desist and to abate the nuisance within 10 days. /sec. 8/.

2. After the ten-day period he shall file with the Smoke Abatement Commission a written statement naming the violators and stating the facts constituting the violation. /sec. 8/.

3. Upon the filing of the written statement the Commission shall fix a time for hearing /See V /2/ / and serve

notice upon the person violating the Ordinance and stating the facts constituting such violation. /sec. 8/.

4. At the time fixed in the order of the Smoke Abatement Commission, any person found guilty of violating the Ordinance shall have the nuisance abated. /sec. 8/.

5. Upon failure to do so, the Commission shall issue its warrant to the City's Chief of Police or the Smoke Inspector who shall then abate the nuisance.

6. An accurate account of the expense of abating the nuisance shall be kept and a report made to the City Controller who shall charge the cost of abating the nuisance against the violation.

B. Procedure

1. Hearing

/a/ The Smoke Abatement Commission's notice to the violator shall include:

/1/ The facts constituting the violation.

/2/ Notice of the hearing.

/3/ Time and place of the hearing.

/b/ The violator shall have the right to appear and be heard in person and by counsel, and if he fails to appear, the matter may be heard in his absence.

/c/ Witnesses may be called by either party.

/d/ If the Board which hears the case finds the person guilty, it directs the abatement within a certain period and under such conditions as the Board may determine.

/e/ If the Board finds him not guilty it shall enter a finding to that effect and the proceedings shall terminate.

/f/ Appeal may be taken by any person who feels aggrieved by the decision. /sec. 8/.

2. Appeal

/a/ Appeal shall be made to the Allen Circuit Court or to the Superior Court of Allen County or to Allen Superior Court No. 2.

/b/ The appellant shall file his complaint by setting forth the action of the Board, causing summons to be issued thereon.

/c/ The cause shall be tried de novo. /sec. 8/.

C. Penalties

1. Any person convicted of violating sections 3, 4, 5 or 6 of this Ordinance shall be fined up to $300. /sec. 9/.

2. Each day upon which the ordinance is violated constitutes a separate offense. /sec. 9/.

3. Penalties shall include the cost of abating the nuisance. See V A 6. /sec. 10/.

VI. Preventive Programs

None.

INDIANAPOLIS, IND.

I. Ordinance

General Ordinance No. 140 - Municipal Code of the City of Indianapolis, 1951 /Title 3, Chapter 2/.

II. General Statement

An ordinance to control air pollution by establishing standards of emission, requiring installation permits, sales reports, and certificates, providing for annual inspections, and prescribing penalties for violations.

III. Administrative Organization

A. Bureau of Air Pollution Control, under the Department of Public Safety headed by the Superintendent of Air Pollution Control appointed by the Mayor. /sec. 3-201/. He shall:

1. head the Bureau.
2. enforce the provisions of this Code and institute proceedings for violations.
3. prepare and execute educational plans for securing the cooperation of the public in the reduction of air pollution. /sec. 3-202/.
4. appoint an assistant superintendent and such inspectors as may from time to time be authorized by the common council, with the approval of the Mayor. /sec. 3-203/.
5. appoint a Chief Clerk and such clerical and stenographic assistants as the common council may authorize. /sec. 3-204/.

B. Arbitration Board - see IV below.

IV. Applicability

A. Sources

Locomotives, metal melting equipment, stacks, furnace and combustion devices, fuel-burning plants, refuse-burning equipment.

The owner or operator of every power and heating plant using in excess of 75 lbs. per hr. of any solid fuel, shall provide means whereby the fireman will be enabled to know, without leaving the boiler or furnace room, whether or not prohibited smoke is issuing from the stack. Such means shall be:

1. an opening providing an unobstructed view of the top of the stack from the furnace room, or
2. a mirror reflecting the top of the stack into the furnace room, or
3. a smoke indicator approved by the Bureau of Air Pollution Control. /sec. 3-222/.

B. Specific Pollutants

1. Smoke of a density equal to or greater than No. 2 Ringelmann is prohibited and declared to be a nuisance, /sec. 3-208/ except:

/a/ When a firebox is being cleaned or a new fire built therein, smoke of a density equal to or less than No. 2 Ringelmann shall be permitted for a period aggregating 9 minutes or less in any 1 hour, or a density of more than No. 2 Ringelmann for a period aggregating 6 minutes or less in any 1 hour.

/b/ After a locomotive is in service or ready for service, smoke of a density equal to or greater than No. 2 Ringelmann shall be permitted for a period aggregating 1 minute or less in any 1 hour.

/c/ When melting from cold charges in commercial metal melting equipment, smoke of a density equal to or less than No. 2 Ringelmann shall be permitted for a period aggregating 9 minutes or less in any 2 hour period, and of a density in excess of No. 3 Ringelmann for a period aggregating 6 minutes or less in any 2 hour period.

/d/ Buildings used exclusively for private residences containing less than 3 dwelling units or flats are exempted from this provision. /sec. 3-209/.

2. No furnace or combustion device for the burning of solid fuel shall be operated without maintaining at the same time a recognized means for reducing the quantity of fly ash emitted into the open air to quantities not exceeding 0.75 grains per cubic foot of flue gas at a stack temperature of 500 degrees F., applying a stack temperature of 850 degrees F., or less, of which amount not to exceed 0.2 of grain per cubic foot shall be of such size as to be retained on a 325 mesh United States standard sieve. These

conditions are to be conformed to when the percentage of excess air in the stack does not exceed 50 percent at full load. Measurement to be according to A.S.M.E. Test Code. /sec. 3-210/.

3. Soot, cinders, dust, dirt, fly-ash, lint, chaff, mists, vapors, obnoxious odors, noxious acids, fumes or gases, shall not be emitted from any stack /chimney, smokestack, open fire structure, or other opening capable of emitting smoke, except outdoor incinerators or approved trash burners used by occupants of private dwellings to dispose of ordinary household papers and combustible material/ in such quantity as to cause injury, detriment or nuisance to any person or the public, or to cause injury or damage to business or property. Such emissions are declared to be a public nuisance. /sec. 3-210/.

V. Enforcement

A. Nuisance

Emissions prohibited by IV B 1 and IV B 3 above, may be summarily abated by the Superintendent or his designee. /secs. 3-208, 3-210/.

B. Unlawful Conduct

1. To break a seal on any equipment duly sealed by the Superintendent without his written authorization to do so. /sec. 3-216/.

2. To interfere with the performance of any duty enjoined by this Ordinance, or to refuse entrance to the premises at reasonable hours for purposes of enforcing it. /sec. 3-217/.

C. Inspections

Shall be made annually of every furnace or other fuel-burning device except those installed to heat buildings used exclusively for private residences containing less than 3 dwelling units or flats, and those used exclusively for private residences which do not contain a central heating plant. /sec. 3-218, 3c/.

D. Sealing

1. After previous notice of 3 or more violations within a 12 month period, a person shall be notified to show cause before the Superintendent not less than 10 days thereafter why the offending equipment should not

be sealed. If, upon the hearing at which said person may appear and be heard, the Superintendent finds that adequate corrective measures have not been taken, it shall be his duty to seal such equipment, except locomotives, until a permit and certificate have been applied for and issued. An appeal from his decision may be taken to the Arbitration Board within 10 days, and will serve to stay the decision pending a final determination. /sec. 3-215/.

2. When a certificate of operation is refused on any inspection, the Superintendent may seal the equipment until the provisions of this Ordinance are complied with. /sec. 3-219/.

E. Period of Grace

Whenever a violator has produced evidence satisfactory to the Superintendent that he has taken all steps necessary to future compliance herewith, but that the acquisition of proper equipment cannot be effective immediately the Superintendent shall have discretion to allow and to extend a period within which the needed device is to be acquired and installed. /sec. 3-221/.

F. Record Keeping

All persons selling refuse or fuel-burning equipment for producing heat or power, or both, which require connection to a vent or stack shall report to the Superintendent the sale of every such article, and it shall be the duty of the buyer to give the seller a written statement setting forth the address of the building in which it is to be installed. The report shall be in writing and shall be delivered to the Superintendent within 7 days of the transaction. Wholesale transactions made for the purpose of resale are exempted from this provision. /sec. 3-212/.

G. Procedure

1. Any person aggrieved by a decision of the Superintendent may take an appeal to the Arbitration Board within 10 days of its issue by filing notice of the appeal with the Superintendent, specifying the grounds thereof, and the relief sought. The Board shall fix a reasonable time for a hearing and give due notice to all parties concerned. At the hearing, any party may appear in person or by agent or attorney. Such appeal shall stay the decision appealed from. /sec. 3-205/.

2. At the time of filing the appeal, the appellant shall

submit the name of a person who is to represent him as arbitrator. "The Superintendent shall thereupon inform the appellant of the estimated cost of such arbitration, and such appellant, within twenty-four hours from the receipt of such information, shall deposit with the superintendent the sum of money requested for defraying the expenses of the same, which sum shall include the fees of all arbitrators, as fixed by him, and shall be in proportion to the time it will probably take and the difficulty and importance of the case, but shall in no case be more than the cost of similar services in the course of ordinary business of private individuals or corporations. As soon as such sum of money shall have been deposited with him, the Superintendent shall appoint an arbitrator to represent the city and the two arbitrators thus chosen, if they cannot agree, shall select a third arbitrator. In event said two arbitrators fail to agree on a third arbitrator within five days after their disagreement, the Mayor shall select the third arbitrator, after which the decision of any two of said arbitrators, after investigation and consideration of the matter in question, shall be final and binding upon the appellant and upon the city, unless an appeal be taken from such decision, as provided in case of an appeal under a statutory arbitration, within five days thereafter." Arbitrators may call and swear witnesses, and their written decision shall be delivered to both the Superintendent and the appellant. /sec. 3-206/.

H. Penalties

Any person who violates the provisions hereof shall be fined not less than $10 nor more than $300 for each violation. Each day's violation shall constitute a separate offense. /sec. 3-224/.

VI. Preventive Programs

A. Permits

1. Required for the installation, erection, reconstruction, repair of or addition to fuel-burning plants and refuse-burning equipment.

2. Plans and specifications filed in connection therewith shall show:

/a/ amount of work and heating to be done

/b/ provisions made for securing complete combustion

/c/ manner of burning and preventing air pollution

/d/ kind of fuel, rate and manner of burning

/e/ ventilation provided in place housing the equipment to keep temperature from rising above 120 degrees F., and secure change of atmosphere at least every 10 minutes

/f/ dimensions of room housing equipment, and dimensions and location of all stacks used in connection with the equipment.

3. When the permit has been issued, it shall be the duty of the various departments having charge of the inspection of the premises where the equipment is located to cooperate with the Superintendent in seeing that the work is done in conformity with its terms.

4. Repairs to previously approved equipment may be made without a permit but they must be reported to the Superintendent within three days of their commencement.

5. Emergency repairs may be made without a permit but they must be reported on the first business day thereafter, and application for a permit must then be made.

6. Violations of this section shall be cause for the sealing of the equipment. /sec. 3-211/.

B. Certificates

1. Required for the operation of any plant for the production and generation of heat and power, or either, except locomotives, or for the burning of refuse. /sec. 3-213/.

2. Required for the operation of any furnace or other fuel-burning equipment subject to annual inspection. Such certificate must be obtained annually. /sec. 3-214/.

DAVENPORT, IOWA

I. Ordinance

Ordinance No. 89.

II. General Statement

An ordinance creating the Office of Smoke Inspector; to regulate the emission of dense smoke, dust, soot or fumes; to regulate the construction, installation, alteration of fuel-burning devices and accessary equipment; and to prescribe penalties for violations. Definition of person includes government corporations, departments, bureaus and agencies.

III. Administrative Organization

A. Building Commissioner shall appoint a Smoke Inspector from his staff. The Smoke Inspector's duties shall include:

1. Enforcement of the provisions of the Ordinance, and investigation of all complaints with reference thereto.

2. To make observations in response to complaints; to make the necessary tests; and to keep a record of all such observations and tests.

3. To issue permits after examination of plans and specifications, and to inspect work to determine if it is being carried out in conformity with permi issued.

4. To make an annual report to City Council, and at such other times as Council may require.

5. To prosecute all persons violating the provisions of the Ordinance. /secs. 5, 9, 12/.

IV. Applicability

A. Sources

Fuel-burning equipment, internal combustion engine, premises or open fire, locomotive engine, stack or chimney, and vehicle.

B. Specific Pollutants

1. Smoke

The shade or appearance of which is equal to or darker than No. 2 Ringelmann, is prohibited, except

/a/ Smoke, the shade or appearance of which is equal to but not darker than No. 2 Ringelmann, for a period or periods aggregating 4 minutes in any 30 minutes is permitted, and

/b/ Smoke, the shade or appearance of which is equal to but not darker than No. 3 Ringelmann, for a period or periods aggregating 3 minutes in any 15 minutes, when building a new fire or when breakdown of equipment occurs such as to make it evident that the emission was not reasonably preventable, is permitted.

2. Dust

In gases exceeding 0.85 lb. per 1000 lbs. of gases, adjusted to 50 percent excess air for products of combustion, shall not be emitted into the open air from any fuel-burning equipment or premises, or allowed to pass a convenient measuring point nearest to the stack outlet, except that:

/a/ For fuel-burning equipment or premises constructed, subsequent to the effective date of the Ordinance, a dust collecting efficiency of not more than 85 percent shall be required for special dust-separating equipment, and

/b/ For fuel-burning equipment or premises constructed prior to the effective date of the Ordinance, a dust collecting efficiency of not more than 75 percent shall be required for special dust-separating equipment, and

/c/ The limitations given shall be waived during periods when breakdown of equipment occurs such as to make it evident that the emission was not reasonably preventable, and

/d/ The amount of solids in the gases shall be determined according to the A.S.M.E. Test Code.

3. Soot or Fumes

That are a detriment to the property of others or that are a nuisance to any person shall not be emitted into the open air. /sec. 11/.

V. Enforcement

A. Abatement

It shall be the Inspector's duty to prosecute all persons violating the provisions of the Ordinance regulating the emission of dense smoke, and in all cases where the punishment by fine fails to abate the nuisance, he shall cause to be brought in the District Court for Scott County an action for the abatement thereof. /sec. 12/.

B. Unlawful Conduct

1. To violate the seal on any fuel-burning equipment that has been sealed at the direction of the Smoke Inspector unless authorized by him in writing to do so. /sec. 11 /f/ /.

2. To install, alter or repair fuel-burning equipment without first submitting plans and specifications and securing a permit. /secs. 5, 6/.

C. Sealing

1. After any person of any premises has been previously notified of three or more violations within any consecutive twelve-month period, such person shall be notified to show cause before the Smoke Inspector, not more than ten days after notice, why the equipment causing the violation should not be sealed.

2. Upon such hearing, if the Smoke Inspector finds that adequate corrective means and methods have not been employed to correct the cause of such condition, then it shall be his duty to seal the equipment until such time as an Installation Permit and Operating Permit have been applied for and issued for the equipment.

3. Each day's violation constitutes a separate offense. /sec. 11 /e/ /f/ /.

D. Penalties

1. Any person or corporation who shall violate any of the provisions of the Ordinance shall be fined not less than $10 nor more than $100 for each offense. /sec. 13/.

2. A fine not to exceed $25 for each day upon which alterations, changes, or installations are made without a permit. Each day's violation constitutes a separate offense. /sec. 6/, /see VI/.

VI. Preventive Programs

A. Installation Permits

1. Required for new plants and the reconstruction of old plants for producing heat and power, and for the installation of any new chimney, furnace or fireplace connected with such plant, or any steam plant, and for the alteration and repair of an old chimney, fireplace, furnace or device which shall effect smoke prevention, except

/a/ That minor necessary or emergency repairs which do not increase the capacity of such plant or which do not involve any alteration in the method of efficiency of smoke prevention may be made without a permit.

2. Applications for permits shall be accompanied by plans and specifications showing

/a/ The amount of work and the amount of heating to be done by such plant and all appurtenances thereto.

/b/ All provisions made for the purpose of securing reasonably complete combustion of the fuel to be used and for the purpose of preventing smoke.

/c/ A statement of the kind of fuel proposed to be used. /secs. 5, 6/.

DES MOINES, IOWA

I. Ordinance

City Code Chapter 51 /Based on Code 1942/.

II. General Statement

Ordinance declares emission or smoke to be a nuisance, gives duties of enforcement to Heating Plant and Smoke Inspector, requires permits and regulates boilers.

III. Administrative Organization

Heating Plant and Smoke Inspector supervises the section of Smoke Control and Power Engineering, Division of Building Inspection Services, Department of Public Safety. He is appointed by Mayor. He is responsible to Building Inspection Services Superintendent for the enforcement of chapter, including approval of all plans for construction, erection, alteration or repair of combustion unit of any plant or boiler for production of heat or power, except in single or two family. He is responsible for inspection of plants after construction completed and the investigation of violations. He has right of entry at reasonable times in the pursuit of official duties. He is responsible for keeping records and making reports as required by law and other duties. /secs. 51-2 to 51-6/.

IV. Applicability

A. Sources /sec. 51-21/.

1. Horizontal Return Tubular Boilers

/a/ With more than 1,000 square feet of heating surface using coal, shall be provided with mechanical stoker.

/b/ With less than 1,000 square feet of heating surface shall be fitted with hand-fired furnaces or stokers, in connection with such arches, baffles, piers, wing walls, refractories, or other gas-mixing devices deemed adequate to prevent dense smoke.

/c/ Where mechanical stokers installed, full extension furnaces shall be used.

/d/ Distance between grate and shell not to be less than diameter of boiler.

/e/ Boiler of less than 48 inches cannot be set less than 48 inches from grate to shell.

/f/ Where gas, oil, powdered coal or other fuel not requiring grate, distance between floor line and shell of boiler to be not less than 30 percent more than diameter of boiler.

/g/ Grate area of any return tubular boiler setting, using coal, to be not less than one-fortieth of heating surface where stokers used and not less than one-thirty-fifth of heating surface in hand-fired furnaces.

2. Water Tube Boilers /horizontal/

/a/ With more than 1,000 square feet of heating surface, using coal, to be provided with mechanical stoker.

/b/ With horizontal baffles, installed with mechanical stoker, to be set with minimum distance of 8 feet from floor line to bottom of front header.

/c/ Such stoker may be flush front or extension furnace settings provided, that the flame travel from point of introduction of green coal to nearest point of passage of gases between tubes to be not less than 8 feet. Distance from grates to lower side of bottom row of tubes can never be less than 6 feet.

/d/ Boilers vertically baffled, installed with mechanical stokers to be set with minimum distance of 9 feet from floor line to bottom of front header.

/e/ Such stoker may be flush front or extension furnace setting; provided that the flame travel from point of introduction of green coal to nearest point of passage of gases between tubes to be not less than 9 feet. Distance from grates to lower side of bottom row of tubes can never be less than 6 feet.

/f/ Hand-fired boiler, horizontally baffled, to be set with minimum distance of 8 feet from floor line to bottom of front header.

/g/ Hand-fired boiler, vertically baffled, to be set with minimum distance of 8 feet from floor line to bottom of front header.

/h/ All boilers to have such piers, arches, wingwalls or other gas-mixing devices adequate to prevent dense smoke.

/1/ Grate area of any boiler using coal as fuel not to be less than one-fortieth of heating surface, where stokers used and not less than one-thirty-fifth of heating surface in hand-fired furnaces.

3. Water Tube Sterling /vertical/

To be set with full extension furnaces; provided, that flame travel from point of introduction of green coal into furnace to nearest point of passage of gases between tubes to be not less than a foot; or may be flush front provided that flame travel equivalent to that of extension furnace obtained.

4. Scotch Marine Type

Internally fired to be installed with full extension furnaces, or stoker of approved design, adequate to prevent dense smoke.

5. Firebox and Tubular Return Flue Type

To be fitted with down draft, underfeed fire arch, or other acceptable smokeless type furnace.

6. Cast Iron Sectional and Miscellaneous

To be fitted with down draft, underfeed fire arch, or other acceptable smokeless type furnace.

7. Stokers

Installation to be in accordance with accepted standards of Stokers Manufacturers' Association Uniform Stoker Ratings and minimum setting heights, and installations based on 8,500 BTU coal content.

8. Oil Burners, Gas Burners, Powdered Coal

Where gas, oil, powdered coal or other fuel not requiring grate, distance between floor line and shell of boiler to be not less than 30 percent more than diameter of boiler.

9. Breechings

/a/ Unless height of flue or stack greater than 150 feet, breeching must not drop from boiler to stack.

/b/ Where it is rectangular in section, ratio of dimensions not to be greater than three to two.

/c/ Minimum radius of central line of all bends to be not less than twice the diameter of breeching. In construction of smoke pass or breeching, shortest distance from furnace to stack to be used, and long sweeping bends in pipe to be standard practice.

10. Stacks

/a/ Size and height of stack to be determined by Kent's formula.

/b/ Approved method to obtain heights and areas of chimneys for boilers operating at given rating listed.

/c/ Where existing stack is nuisance to occupants of new buildings within radius of 50 feet. Owner of new building may be required to extend existing stack to height sufficient to prevent down drafts or eddies.

/d/ Smoke control and power engineering section may order existing stacks to be extended if creating smoke nuisance to adjoining property.

11. Boiler Room Ventilation

Each boiler to have fixed opening to external air, properly louvered, with area equal to at least three-fourths area of stack.

B. Specific Pollutants

1. Dense Smoke

Defined as smoke of "a degree of density of No. 3 Ringelmann or greater, and also to be held to include smoke containing such noxious or harmful gases as result from improper combustion and in such volume as to be reasonably objectionable to the public, unreasonably harmful to property within the vicinity or of such density as to reasonably obscure the view of objects of which it is in the line or view." /sec. 51-1 /f/ /.

Emission of dense smoke from smoke stack of locomotive, engine or stationary boiler, or from smoke stack, chimney or fireplace of any building or plant declared to be a nuisance and is prohibited. /sec. 51-7/.

Umbrascope or standard smoke tester, or similar instruments may be used in conjunction with Ringelmann Smoke Chart and it may be augmented by photographs, or moving pictures. /sec. 51-10/.

V. Enforcement

A. Variance

1. Violations resulting from inadequate or obsolete equipment not to be prosecuted for reasonable time to be determined by Heating Plant and Smoke Inspector. /sec. 51-11/.

2. Single- or two-family dwellings exempted from ordinance. /sec. 51-20/.

B. Penalties

1. Owner, lessee or occupant of any building or plant and fireman, engineer or other in charge of furnace, fireplace or stationary boiler, causing emission of dense smoke is guilty of creating public nuisance and of violating ordinance. All persons participating in violation of ordinance jointly and severally liable. No specific penalties provided. /sec. 51-8/.

2. Same provisions as above apply to owner of locomotive engine, General Manager, Superintendent or other responsible person of railroad company. /sec. 51-9/.

VI. Preventive Programs

A. Permit

1. Construction, erection, alteration or repair of combustion unit or accessories of plant or boiler for production of heat or power prohibited until permit obtained from Heating Plant and Smoke Inspector. /sec. 51-12/.

2. Application for permit to show work to be done, size and make of boiler, equipment, and stoker, or burner, fuel to be used, size of breeching and other information pertinent to the installation. Application to contain duplicate plans and specifications. /sec. 51-13/.

3. Permits to be issued after approval of application and within reasonable time. /sec. 51-14/.

4. Holder of permit to notify Smoke Control and Power Engineering Section of completion of work. Inspection will then be made. /sec. 51-15/.

5. Permit to be posted conspicously. /sec. 51-16/.

6. Use of new, reconstructed or repaired combustion unit, prohibited until approval granted by Inspector. Approved permits to be retained and posted conspicuously. Failure to notify Smoke Control and Power Engineering Section of time for inspection of completed work and failure to comply with requirements is violation of ordinance. /sec. 51-17/.

7. Fees required according to schedule. /sec. 51-22/. Where work not started or not intended to be completed fees may be refunded. /sec. 51-18/.

8. Minor repairs which do not increase capacity of plant, or which do not involve alteration in smoke prevention, may be made without permit. /sec. 51-20/.

9. Issuance of permit or his approval of permit is not a defense from prosecution for violation of ordinance. /sec. 51-23/.

DUBUQUE, IOWA

I. Ordinance

City Ordinance No. 57.

II. General Statement

An ordinance to establish a department of smoke inspection; to provide for a smoke inspector, and a smoke abatement committee; to regulate the density of smoke; and to prescribe penalties for violations.

III. Administrative Organization

A. Department of Smoke Inspection, headed by the Smoke Inspector. He shall be appointed by the City Council. His duties shall include:

1. Administration of the Department.

2. To enforce the provisions of the Ordinance upon his own initiative and upon the complaints of others with reference to violations.

3. To make observations of the stacks or chimneys complained of, testing the density of smoke, and to maintain a record of all such observations.

4. To prosecute all persons violating the provisions of the Ordinance, and in all cases where punishment by fine fails to abate the nuisance, he shall cause to be brought an action of abatement. /sec. 12/.

B. Abatement Committee of 5 members appointed by the Mayor to advise the Smoke Inspector in the conduct of the Department. /sec. 6/.

IV. Applicability

A. Sources

Smokestack of any locomotive or engine, stationary engine, or smokestack, chimney or fireplace of any building or plant.

B. Specific Pollutants

1. Smoke of a degree of density equal to or greater than No. 3 Ringelmann for more than the aggregate of 6 minutes in any one hour is prohibited, except that:

/a/ The stacks of locomotives moving trains of 6 cars or more may be permitted to emit smoke in any 5 minute period for an aggregate of 20 seconds in excess of that provided for, and

/b/ That stacks of locomotives in and about roundhouses may emit smoke of a degree of density equal to or greater than No. 3 Ringelmann for 60 minutes during the period when the fire is being built or rebuilt after cleaning the boiler. /sec. 10/.

V. Enforcement

A. Nuisance

The emission of dense smoke in excess of the quantities provided for is deemed to be a public nuisance. The Smoke Inspector shall, in all cases where the punishment by fine fails to abate the nuisance, cause to be brought in the District Court in and for Dubuque County an action for the abatement thereof.

B. Variances

Temporary permits for the emission of smoke covering periods not exceeding six months may be granted by City Council to any person applying for same and satisfying the Council that he will make changes or improvements to prevent violations, but no permits shall be granted unless the Council is satisfied that the public convenience requires it. /sec. 13/.

C. Penalties

Any person, firm or corporation violating any of the provisions of the Ordinance shall be fined not less than $10.00 nor more than $100.00 for each offense. /sec. 14/.

VI. Preventive Programs

None.

SIOUX CITY, IOWA

I. Ordinance

Ordinances of Sioux City, Title VII, Chapter 92, Sections 92-1 through 92-7.

II. General Statement

An ordinance to regulate the emission of dense smoke; to provide for enforcement by the Furnace Inspector; and to prescribe penalties for violations.

III. Administrative Organization

The Furnace Inspector in and for Sioux City shall have the duty to enforce the Ordinance. His other duties include:

1. To investigate all complaints with reference to violations.
2. Upon the filing of a complaint, to proceed at once to make observations of the stacks or chimneys complained of.
3. To test the density of smoke complained of by use of the Ringelmann Chart.
4. To keep a record of all such observations and to forthwith report his findings and recommendations in writing to the City Manager. /sec. 92-6/.

IV. Applicability

A. Sources

Smokestack of any locomotive, steam boat or steam tug, smokestack or chimney of any building or premises. /sec. 92-7/.

B. Specific Pollutants

Smoke of a greater density than No. 3 Ringelmann is prohibited. /sec. 92-1/.

V. Enforcement

A. Nuisance

1. The emission of dense smoke anywhere within the corporate limits of the city is declared to be a public nuisance and is prohibited. /sec. 92-1/.

2. The owner of any locomotive engine and the general manager, superintendent, yardmaster or other officer of any railroad company having charge or control over the operation of any locomotive engine, who shall cause, permit or allow the emission of dense smoke, shall be deemed guilty of creating a public nuisance and violating provisions of the Ordinance. /sec. 92-2/.

3. The owner, lessee or occupant of any building or plant and the fireman, engineer or any other person having charge or control of any furnace, fireplace or stationary engine who shall cause, permit, or allow the emission of dense smoke shall be deemed guilty of creating a public nuisance and violating the provisions of the Ordinance. /sec. 92-3/.

4. City Council may, by resolution, divide the city into districts and may exempt from the provisions of the Ordinance chimneys emitting smoke from brick and tile kilns or other plants within districts outside the central part of the city. /sec. 92-5/.

B. Penalties

1. Any person who violates the provisions of the Ordinance, and upon conviction thereof, shall be fined not less than $10 nor more than $100 for each offense, and each day on which there is an emission of dense smoke constitutes a separate offense.

2. Penalty provision shall not apply to detached private residences, nor to buildings used exclusively for private residence purposes, in which the number of families occupying apartments shall be less than three. /sec. 92-7/.

WATERLOO, IOWA

I. Ordinance

Ordinance No. 1945.

II. General Statement

An Ordinance establishing a division of air pollution regulation and inspection; creating the office of air pollution inspector; regulating the emission of dense smoke, soot, cinders, dust, noxious acids, fumes, gases, odors, or other materials that are of such character as to be a nuisance; regulating the construction or reconstruction of fuel-burning equipment; creating an advisory and appeal board; and prescribing penalties for violation.

Definition of person includes governmental corporations. Private residences containing four or less dwelling units are exempt.

III. Administrative Organization

A. Air Pollution Inspector, designated as Second Assistant to the Building Commissioner, appointed by the City Council. His duties shall include:

1. Enforcement of the Ordinance, and such other duties as the Building Commissioner shall direct.
2. To investigate all complaints of violation; to notify violators in writing of specific violations; to institute necessary proceedings in case of violation.
3. To investigate and make recommendations to City Council with respect to needed revisions pertaining to air pollution control.
4. To make yearly inspections of all fuel consuming devices, except railroad locomotives, and except those contained in or a part of four or less dwelling units to determine whether compliance with the Ordinance is being maintained.
5. To prepare and disseminate educational literature to the public, and to cooperate with all civic or other organizations interested in air pollution control.
6. To promulgate and publish rules and regulations for administration of the Ordinance.
7. To issue all certificates of inspection; to examine plans for all new buildings and for alteration of

existing buildings to assure conformance with ordinance. /secs. 3 and 7/.

B. Advisory and Appeal Board of 5 members, 3 of whom shall be engineers, appointed by the Mayor with approval of City Council. The Board shall decide all appeals properly before it, and shall act as adviser to the Air Pollution Inspector and approve rules and regulations as may be presented by the Inspector. /sec. 4/.

IV. Applicability

A. Sources

Any fuel-burning equipment, internal combustion engine, railroad locomotive, vehicle; premises or open fire, stack or chimney. /sec. 5/.

B. Specific Pollutants

1. Smoke of the shade or appearance which is equal to or darker than No. 3 Ringelmann is prohibited, except that smoke, the shade or appearance of which is equal to but not darker than No. 3 Ringelmann for a period or periods aggregating 5 minutes in any 30 minutes, when building a new fire, cleaning flues, or when breakdown occurs such as to make it evident that the emission was not reasonably preventable, is not prohibited. /sec. 5/.
2. Cinders, soot, dust, fly ash, noxious gases, fumes, gases and odors in such quantities and in such place or manner as to be detrimental to the public, or in such manner as to cause injury or damage to property or business, is prohibited. /sec. 6/.

V. Enforcement

A. Unlawful Conduct

1. For any person, firm or corporation to cause, suffer or allow dense smoke to be emitted into the open air except as otherwise provided. /sec. 5/.
2. For any person, firm or corporation to permit or cause the escape into the open air of cinders, soot, dust, fly ash, noxious gases, fumes, gases and odors except as otherwise provided. /sec. 6/.
3. For any person, firm or corporation to interfere in any manner or impede the performance of duty of the Inspector or his employees or representatives. /sec. 11/.

B. Inspection

Shall be made annually of all fuel-consuming devices, except railroad locomotives, and a certificate that the device meets the standards of the Ordinance shall be issued. Failure to possess a certificate shall be considered a violation of the Ordinance. /sec. 9/.

C. Variances

The Inspector shall have the authority to grant a temporary permit for the continued operation of non-complying equipment upon adequate showing that the terms of the Ordinance cannot be complied with immediately and all necessary steps to comply have been made. Such permit shall be issued for no longer than a six month period, and at the expiration of such time the party holding such permit shall be deemed in violation of the Ordinance if compliance is not accomplished. /sec. 12/.

D. Procedure

1. The Inspector shall conduct a full and complete hearing and notify all parties of his rulings.
2. Appeal from a decision of the Inspector following a hearing shall be taken within 10 days to the Advisory and Appeal Board, and the appeal shall be perfected by service upon the Inspector of written notice of intention to appeal.
3. Until such appeal is heard by the Advisory and Appeal Board, no further action shall be taken by the Inspector.
4. The decision of the Advisory and Appeal Board shall be final. /sec. 10/.

E. Penalties

Any person, firm or corporation who shall violate any of the provisions of this Ordinance shall be fined not less than $10 nor more than $100 for each offense. Offenses on separate days shall be deemed to be separate offenses. /sec. 14/.

VI. Preventive Programs

A. Installation and Alteration Permits

1. Required for the construction of new fuel-burning plants or the reconstruction, addition, or alteration to any existing fuel-burning plants, or refuse burning

equipment, or any stack or furnace connected with such fuel- or refuse-burning equipment, if the cost of installation or repair exceeds $100.

2. Applications for permits shall be accompanied by plans and specifications showing:

/a/ All provisions made for the purpose of securing complete combustion of the fuel to be used.

/b/ All provisions made for the purpose of preventing smoke.

/c/ The type of fuel proposed to be used. /sec. 8/.

B. Operating Certificate

1. Required annually for the continued use of all fuel-consuming devices covered by the Ordinance. The Inspector shall issue or deny the certificate after his annual inspection. /sec. 9/.

COVINGTON, KY.

I. Ordinance

City Ordinance No. 24, 1957.

II. General Statement

An ordinance providing for the control of smoke emission within the city limits; to prescribe the use of smokeless fuel or fuel-burning equipment for locomotives; to provide penalties for violations.

III. Administrative Organization

A. Sanitary Officer of the City, or such officer or officers the City Manager designates or deems necessary to enforce the provisions of the Ordinance. /sec. 6/.

IV. Applicability

A. Sources

Chimneys, or other smoke emitting devices, including railroad locomotives, autos and motor trucks. /sec. 1/.

B. Specific Pollutants

1. Smoke

/a/ Of a degree of density equal to or greater than No. 3 Ringelmann is prohibited, except that smoke may be emitted for a period not to exceed three minutes in any one hour, and may be emitted for a period of six minutes in each eight hour period for starting a fire in a cold boiler, or for cleaning the firebox of any boiler, or heating device or other source of smoke emission. /secs. 2 and 5/.

V. Enforcement

A. Nuisance

Any owner, lessee, or occupant of any plant, and the engineer, fireman, or other person in control of any furnace, plant, or other source of smoke, who shall cause or permit smoke of No. 3 Ringelmann density or greater shall be held guilty of creating a public nuisance. /sec. 3/.

B. Penalties

A violation of the Ordinance is deemed a misdemeanor punishable by a fine not to exceed $100 for each offense. Each day the violation continues shall be considered a separate offense. /sec. 7/.

VI. Preventive Programs

None.

JEFFERSON COUNTY, KY.

I. Regulation

Rules and Regulations of the Air Pollution Control District of Jefferson County.

II. General Statement

The purpose of these Rules and Regulations is the elimination of excessive smoke, fly ash, noxious gases, dusts and other air contaminants. The Rules and Regulations are promulgated pursuant to Chapter 77 of the Kentucky Revised Statutes which creates and defines the powers of the Air Pollution Control Districts. The Rules and Regulations require installation permits; define certain requisites for combustion equipment; and enumerate prohibited emissions.

Definition of person includes any city, county, municipality, district, or other political subdivision.

Definition of air contaminant is defined as smoke, charred paper, soot, dust, grime, carbon, noxious acids, fumes, gases, odors, obnoxious or toxic vapors or particulate matter, or any combination thereof.

III. Administrative Organization

Air Pollution Control District headed by the Chief Engineer of Air Pollution Control. /sec. I, Rule 3/.

IV. Applicability

A. Sources

1. Hydrocarbon vapors

All new tanks over 40,000 gallons each in capacity for the storage of gasoline or any petroleum distillate having a vapor pressure of 1.5 lbs. per sq. in. absolute or greater under actual storage conditions, constructed after enactment of this regulation, shall be of the floating roof type or shall be equipped with approved vapor suppression or vapor recovery devices. All existing tanks over 40,000 gallons each in capacity for the storage of gasoline or any petroleum distillate having a vapor pressure of 1.5 lbs. per sq. in. absolute or greater under actual storage conditions, shall within two years after enactment of this regulation be equipped with vapor suppression or vapor recovery devices, except that upon special application to the Board within six months of enactment of this regulation, a longer period, not to exceed five years, of progressive improvement may be allowed. /sec. VI, Rule 4/.

2. Railroad locomotives

Locomotives, cranes, engines and similar equipment requiring the burning of solid fuels shall be equipped with smoke preventive devices which are intended to prevent the emission of smoke as dark or darker in shade than No. 2 Ringelmann. In starting the fires in railroad locomotives, cranes, engines and similar equipment, such devices shall be used. /sec. V, Rules 1 and 2/.

B. Specific Pollutants

1. No one shall discharge into the atmosphere from any source any air contaminant for a period or periods aggregating more than 3 minutes in any one hour which is:

/a/ As dark as or darker in shade than No. 2 Ringelmann.

/b/ Of such opacity as to obscure an observer's view to a degree equal to or greater than the smoke described in I of this section. /sec. VI, Rule 1/.

2. No person shall cause to be emitted into the open air from any stack or chimney of a steam generating plant of any size, fly ash or dust in any amount greater than .85 lbs. per 1,000 lbs. of flue gas corrected to 50 percent excess air. No person shall cause to be emitted into the open air from any stack or chimney of a steam generating plant having a total capacity of more than 200,000 lbs. of steam per hour in burning solid fuel in suspension, fly ash or dust in any amount greater than .40 lbs. per 1,000 lbs. of flue gas corrected to 50 percent excess air. /Reg. VI, Rule 3/.

3. No persons shall cause to be emitted into the open air, except as specified in IV, A, 2, above, any process dust above 10 microns in particle size, in excess of .85 lbs. per 1,000 lbs. of effluent air or gases. Of this effluent dust no more than .20 lbs. shall be larger than that which will pass through a U.S. Standard 325 mesh screen. In no case shall a greater total amount of process dust be allowed to escape from all points of emission within any plant than the equivalent of 1.0 percent of the weight of the dry solid process materials

entering the plant processes. /Reg. VI, Rule 5/.

V. Enforcement

These Rules and Regulations contain no provisions pertaining to enforcement. Enforcement is accomplished according to the following provisions of the enabling act which creates this Air Pollution Control District.

A. Every person who violates provisions of these Rules and Regulations is guilty of a misdemeanor and is subject to a fine of between $10.00 to $500.00. /KRS 77-235/.

B. Any violation of the provisions of these Rules and Regulations may be enjoined in a civil action brought by the Air Pollution Control District or any authorized person. Such abatement may be in addition to the fine provided. /KRS 77-240/.

VI. Preventive Programs

A. Permit

1. Before any equipment is installed or altered by a major repair a permit must be obtained from the Air Pollution Control District, provided, however, that oil and gas burning heating equipment with an input capacity of less than one million BTU per hour is excepted from this rule and requires no permit. /Reg. II, Rule 1/.

2. Fees for the issuance of permits ought to be charged according to the schedule supplied in the Rules and Regulations. The fees vary from $5.00 to $25.00 depending on the size and type of installation. /Reg. II, Rule 8/.

B. Plan Approval

The Rules and Regulations set forth the general principles for the following subject which are to govern the approval of plans and the issuance of permits for equipment using solid fuels:

1. Repair or installation of low pressure heating boilers and warm air furnaces.

2. Steam or heat generating capacity for boilers other than in 1.

3. All equipment for the production of heat or power by the combustion of fuels shall be provided with

mechanical fuel-burning devices or shall be fired only with a smokeless solid fuel approved by the Chief Engineer.

4. No mechanical stoker shall be installed or used which is not approved by the Chief Engineer.

5. For low pressure heating boilers the size and setting height of the stoker shall not be less than that recommended in the stoker Manufacturers Association Manual.

6. Required minimum distance from shell to grade in horizontal return tubular boilers.

7. For all other boilers the stoker size and setting height shall be in accordance with best accepted practice. Coal burning rates in excess of 35 lbs. per sq. ft. per hour and a furnace heat release in excess of 35,000 BTU per cubic ft. per hour will in general not be approved.

8. Fly ash collecting equipment requirements for spreader stokers, pulverized coal burners for other equipment burning any solid fuel in suspension.

9. In the case of oil- or gas-burning equipment having an input capacity of one million BTU per hour or more, the recommendations of the Oil Heat Institute and/or American Gas Association and/or American Society Heating and Ventilating Engineers and/or of the manufacturers will be followed.

10. Approval of plans and the issuance of permits for incinerators shall be governed by rules for the following subject:

/a/ The necessary components of incinerators for the destruction of waste materials.

/b/ The destruction of odors and objectionable gases in small commercial incinerators.

/c/ Auxiliary burners, fly ash collectors and/or screens at the top of the stack shall be installed when in the discretion of the Chief Engineer they are necessary.

/d/ The acceptable designs of incinerators.

11. Plans submitted for the issuance of permits or chimneys must show compliance with the rules for area and height.

12. In order to procure a permit for the installation or alteration of dust-separating equipment the manufacturer, installer, or contractor must present proof to the Chief Engineer that the equipment will meet all the requirements of the law.

13. The required capabilities of fly ash collectors.

14. The requirements of any air or gas scrubbers to be installed or altered.

15. Requirements for fly ash collectors for any existing spreader stoker, pulverized coal burner or other mechanical equipment burning solid fuel in suspension.

16. Existing equipment must be brought into compliance with the law within a reasonable time not to exceed one year from the date of written notice from the Chief Engineer. /Reg. III, Rules 1 through 7/.

C. Certificate of Operation

At the conclusion of work the person doing such work shall notify the Air Pollution Control District who shall then cause the work to be inspected for compliance with the plans and specifications. A certificate of operation shall be issued by the Air Pollution Control District to show such compliance. /Reg. II, Rules 5 and 6/.

LOUISVILLE, KY.

I. Ordinance

Ordinance No. 141, June 6, 1961.

II. General Statement

This ordinance controls the emanation of dust from parking lots.

III. Administrative Organization

Air Pollution Control District of Louisville and Jefferson County. /sec. 3/.

IV. Applicability

Anyone operating a parking lot or storage space for automobiles the ground space of which is composed of dirt, sand, cinders, lime stone, or other loose material shall keep it thoroughly sprinkled or treated with water, or other means, so that dust from the composition of the ground space will not be raised, carried or blown. /sec. 1/.

V. Enforcement

A. The Air Pollution Control District of Louisville and Jefferson County shall make inspections and upon finding a violation shall notify the operator in writing to correct the violations within five days. /sec. 3/.

B. Violations of this ordinance are punishable by a fine of between $10.00 and $25.00. Each day after notification shall constitute a separate expense. /sec. 2/.

VI. Preventive Programs

None.

NEW ORLEANS, LA.

I. Ordinance

New Orleans Building Code, Chapter 51 /Ordinance 17,525/

II. General Statement

Ordinance makes the emission of dense smoke, soot, cinders, fly-ash, dust, sawdust, cement ash, hulls and obnoxious odors a nuisance. It requires the submission and approval of plans and specifications, the issuance of permits for the construction, alteration or installation of power and heat plants, and the procurement of certificates for the operation of such plants.

III. Administrative Organization

A. Division of Regulatory Inspections of the Department of Safety and Permits

B. Director of the Department of Safety and Permits

Duty of Director to investigate, on his own initiative or on complaint, any and all cases of violations of the Code. Director to keep record of all his acts in discharge of duties and all inspections made by him. Records open to public inspection. He shall inspect all plans of new structures, all reconstruction, alteration or repairs of old structures covered by Code relative to smoke abatement and appliances used in connection therewith.

IV. Applicability

A. Sources

1. Chimneys

When new building to be erected within radius of 100 feet from and above the top of a chimney, flue or stack on adjacent property, the new building owner, if desiring chimney, flue or stack to be extended, shall pay the costs of extension, unless adjoining property owner, after written notice, is unwilling to have extension made, in which case, Division shall require owner of adjoining property to make extension at his own expense, if a nuisance is caused by such non-extension. If new building owner fails to notify owner of adjoining property, Division shall cause extension to be made at expense of new building owner, if nuisance can be shown to exist.

2. When top of chimney of building erected before Code

is lower than building erected before Code, which is within 100 feet of chimney, and smoke, fumes, gases, odors or fly-ashes from chimney are objectionable and constitute a nuisance, owner of chimney, upon written notice from Division, shall extend chimney 20 feet above highest point of building. This height may be reduced by the installation of an efficient type of smoke collector subject to the approval of the Director. /Art. 5104/.

B. Specific Pollutants

1. Smoke

Emission of dense smoke from any railroad engine, steamboat, steamship, tugboat, or any other self-propelled steam vessel, roller, steam derrick or hoist, steam piledriver, steam concrete mixer, kettle or similar machine or contrivance, or of any building, apartment house or premises, is a misdemeanor. /Art. 5101/.

2. Other Pollutants

Emission of dense smoke, soot, cinders, fly-ash, dust, sawdust, cement ash, hulls and obnoxious odors from any railroad engine, steamboat, steamship, tugboat, or any other self-propelled vessel, steam roller, steam derrick, or hoist, steam piledriver, concrete mixer, kettle, or other contrivance or machine, or from any plant, mill, building, apartment house or premises, is a nuisance. /Art. 5103/.

V. Enforcement

A. Unlawful Acts

1. Emissions specified in Art. 5101.

2. Blowing of tubes

Unlawful for owner or operator of any railroad engine, steamboat, steamship, tugboat, or any other self-propelled steam vessel, steam roller, steam derrick or hoist, or any other machine or contrivance to blow tubes by the mechanical process or with automatic soot blowers. /Art. 5102/.

B. Abatement

Director has authority to abate summarily any nuisance in violation of Code. /Art. 5103/.

C. Penalties

Prescribed elsewhere in New Orleans Building Code.

VI. Preventive Programs

A. Permits

Existing plant or plant about to be constructed, for the production of power or heat, cannot be constructed, reconstructed, installed or altered, until plans and specifications for such work shall have first been submitted to the Director, approved and a permit for such work issued by him. It is duty of Director to see that work is done in accordance with plans and specifications. /Art. 5104/.

1. Approval of plans and specifications by Director is not exemption from prosecution for emission of smoke in violation of Code. /Art. 5108/.

B. Certificate

New or reconstructed plant for production and generation of heat and power cannot be used until certificate procured from Director. /Art. 5105/.

VII. Miscellaneous

Dock Board is requested and police force enjoined and required to assist in the enforcement of Code and to report violations to Director. /Art. 5106/.

PORTLAND, MAINE

I. Ordinance

Ordinance of June 6, 1949.

II. General Statement

This Ordinance creates an Advisory Board on Smoke Control and lists certain prohibited emissions.

III. Administrative Organization

Advisory Board on Smoke Control to devise and promulgate methods of effecting Smoke Control. /Preamble/.

IV. Applicability

A. Every appliance and every owner or operator of such appliance which emits smoke equal to or darker than No. 2 Ringelmann shall be deemed to fall short of these standards excepting:

1. Smoke from a firebox, furnace, boiler, or similar fuel consuming device other than a locomotive, vehicle or similar contrivance, the shade or appearance of which is equal to but not darker than No. 2 Ringelmann for a period or periods aggregating not more than 4 minutes in any 30-minute period.

2. Smoke from a firebox, furnace, boiler, or similar fuel consuming device other than a locomotive, vehicle or similar contrivance, the shade or appearance of which is equal to but not darker than No. 3 Ringelmann for a period or periods aggregating not more than 3 minutes in any 15-minute period, when building a new fire or when breakdown of equipment makes it evident that the emission is temporary and not reasonably preventable.

3. Smoke from any railroad locomotive, internal combustion engine, vehicle or similar contrivance, the shade or appearance of which is not darker than No. 2 Ringelmann for a period in excess of one continuous minute after said locomotive, internal combustion engine, vehicle or similar contrivance is in or ready for service.

4. Smoke from any railroad locomotive or similar contrivance, the shade or appearance of which is not darker than No. 3 Ringelmann for a continuous period not in excess of 6 minutes in one hour when "lighting up" the fire. /sec. 2/.

B. Any and every appliance shall be deemed to fall short of these standards for control of soot, cinders, fly-ash, unburned or partially burned particles, dust, noxious acids, fumes, gases or similar residue discharged into the open air, and the owner and operator thereof shall be deemed to be falling short of good cooperation with the anti-air-pollution program of the City, if and when said appliance discharges into the open air in such quantities or manner as to be injurious, noxious or offensive to a neighborhood, or as to endanger the health, comfort or safety of the public, or as to cause or have a tendency to cause injury or damage to property or business. /sec. 3/.

1. Any and every appliance shall be deemed to fall short of these standards for smoke control, and the owner and operator thereof shall be deemed to be falling short of good cooperation with the smoke control program of the City, if and when said appliance discharges or emits into the open air smoke, the shade or appearance of which is equal to or darker than No. 2 Ringelmann, excepting:

/a/ Smoke from a firebox, furnace, boiler, or similar fuel consuming device other than a locomotive, vehicle or similar contrivance, the shade or appearance of which is equal to but not darker than No. 2 Ringelmann for a period or periods aggregating not more than 4 minutes in any 30-minute period.

/b/ Smoke from a firebox, furnace, boiler, or similar fuel consuming device other than a locomotive, vehicle or similar contrivance, the shade or appearance of which is equal to but not darker than No. 3 Ringelmann for a period or periods aggregating not more than 3 minutes in any 15-minute period, when building a new fire or when breakdown of equipment makes it evident that the emission is temporary and not reasonably preventable.

/c/ Smoke from any railroad locomotive, internal combustion engine, vehicle or similar contrivance, the shade or appearance of which is not darker than No. 2 Ringelmann for a period in excess of one continuous minute after said locomotive, internal combustion engine, vehicle or similar contrivance is in or ready for service.

/d/ Smoke from any railroad locomotive or similar contrivance, the shade or appearance of which is not darker than No. 3 Ringelmann for a continuous period not in excess of 6 minutes in one hour when "lighting up" the fire.

2. Any and every appliance shall be deemed to fall short of these standards for control of soot, cinders, fly-ash,

unburned or partially burned particles, dust, noxious acids, fumes, gases or similar residue discharged into the open air, and the owner and operator thereof shall be deemed to be falling short of good cooperation with the anti-air-pollution program of the City, if and when said appliance discharges into the open air in such quantities or manner as to be injurious, noxious or offensive to a neighborhood, or as to endanger the health, comfort or safety of the public, or as to cause or have a tendency to cause injury or damage to property or business.

BALTIMORE, MD.

I. Ordinances

Ordinance No. 358, Article 12, City Code, April 9, 1956; Ordinance No. 160, December 23, 1959, Smoke Control Ordinance, as amended.

II. General Statement

Ordinance No. 160 prohibits emission of dense smoke, dust, ashes and soot, requires permits and imposes penalties. Ordinance No. 358 prohibits emission of noxious acid, gas, vapor, and odor, requires survey of proposed construction, operations and processes and permission from Commissioner of Health and imposes penalties.

III. Administrative Organization

A. Commissioner of Health

1. Authorized to conduct surveys, investigations, studies and similar activities as he may deem necessary to establish the practical limits of air pollution in the city. /Ordinance No. 358, sec. 7B/.
2. His duties include preparation and execution of educational and cooperative plans and undertakings for securing the compliance of the public in the reduction of the emission of smoke.
3. The performance of such examinations, inspections and issuance of permits, as are instituted by the Advisory and Appeal Board to insure that new or remodeled fuel and/or material burning installations are suited for the prevention of the emission of smoke to the prescribed degree.
4. Inauguration of prosecutions for non-compliance with ordinance. /Ordinance No. 160, sec. 199/.
5. Adopt rules and regulations necessary and proper for the enforcement of Air Pollution Ordinance and for the better protection of the health of city. /Ordinance No. 358, sec. 7E/.

B. Advisory and Appeal Board of 5 members appointed by the Mayor. Board to be an agency for adjudication of the various technical and economic problems that occur in the formulation of the type and kind of supervisory control over new and remodeled installations of combustion equipment in so far as emission of smoke to the atmosphere is concerned. Board to determine after investigation and consultation the methods of examination and inspection and the factors to be considered to insure that new or remodeled fuel and/or material burning installations will be suited for the prevention of the emission of smoke to the degree prescribed in the Ordinance, but Board shall have no authority to inquire regarding the manufacturing processes of metallurgical, chemical, oil refining processes, ceramic, or other commodity manufacturing industries involving the combustion of fuel and/or material, beyond the requiring of evidence that the installation will be suited in the prevention of emission of smoke. /Ordinance No. 160, sec. 200/.

C. Air Pollution Reference Committee of 4 persons appointed by Commissioner of Health, which shall hear appeals from order or decision of the Commissioner, and review facts of case, and upon such request Commissioner of Health shall obtain advice of Committee which advice shall be considered by but not binding upon the Commissioner. /Ordinance No. 358, secs. 7F, 7G/.

IV. Applicability

A. Sources

1. Railroads

Steam railroads or locomotives shall use a smokeless solid fuel, or oil or diesel, or electric engines or locomotives equipped with mechanical fuel burning device, or equipped with over fire jets. Provision applies to all locomotives either in service or being prepared for service in transfer, yard or switching operations, but does not apply to road engines which are serviced in roundhouses so equipped as to enable them to comply with the dense smoke provisions of ordinance. /Ordinance No. 160, sec. 204/.

B. Specific Pollutants

1. Smoke

Emission of dense smoke within city from smoke stack of any boat, tug, roller, derrick, pile driver, tar kettle or other similar machine or contrivance, or from an open fire, or from the smoke stack or chimney of any building, roundhouse or premises, except for a period of or periods aggregating 9 minutes or less in any one hour of a density of No. 2 Ringelmann, or 6 minutes or less of a density in excess of No. 2 Ringelmann in any one hour at a time when the firebox is being cleaned out or a new fire being built therein, or from the stack of any locomotive, tug or boat for a period in excess of one continuous minute in any one hour after said locomotive, tug or boat is in or ready for service, prohibited and declared to be a nuisance. /Ordinance No. 160, sec. 201/.

2. Dust and Fly Ash

Emission or discharge into atmosphere of ashes, cinders, dust, soot and fly ash from chimneys, flues and smoke stacks where the quantity of solids emitted exceeds 0.75 grains per cubic foot of flue gas at a stack temperature of 500 degrees F. of which amount not to exceed 0.2 of a grain per cubic foot shall be of such size as to be retained on a 325 mesh U.S. Standard sieve prohibited. These conditions are to be conformed to when the percentage of excess air in the stack does not exceed 50 percent at full load. The above requirements are to be measured by the methods outlined in the Tentative Test Code for dust-separating apparatus of the A.S.M.E. /Ordinance No. 160, sec. 202/.

3. Noxious Acid, Gas Vapor or Odor

Operation or use of any equipment, process, structure or space, indoors or outdoors, static or mobile, not to allow such equipment to emit any noxious acid, gas, vapor, or odor not within the scope of Ordinance No. 160, in such manner as to be detrimental to the health or safety of the public or to interfere unreasonably with the comfort of the public prohibited. /Ordinance No. 358, sec. 7A/.

C. Volatility

Solid fuel for hand firing or surface burning types of equipment which does not meet standard, below, cannot be imported, sold, offered for sale, exposed for sale or exchange for use or consumption, or used or consumed in the City. Smokeless solid fuel standard is fuel, the volatile content of which is 23 percent or less on a dry basis. Provided, that if a fuel contains volatile matter in excess of 23 percent on a dry basis, it shall be acceptable if it meets the same standards in regard to smoke production as that of a fuel containing less than 23 percent volatile matter on a dry basis. Section does not apply to homes of three families or less. /Ordinance No. 160, sec. 203/.

V. Enforcement

A. Abatement

Emission of dense smoke may be summarily abated. /Ordinance No. 160, sec. 201/.

B. Notice to Control

In conduct of surveys, investigations, studies, or on citizen's complaint, if any equipment, process, structure, space, or material is found by the Commissioner of Health to emit substances which, in his opinion, are dangerous or detrimental to the health or safety of public, he may notify the owners or operators of such equipment, to remove or control the cause of such emission within the time and in the manner that will accomplish such results as may be prescribed in such notice. /Ordinance No. 358, sec. 7D/.

C. Sealing

1. Commissioner of Health authorized to seal immediately any equipment if the plans and specifications for their installation, reconstruction have not been filed and approved. /Ordinance No. 160, sec. 205/.

2. After owner or other person connected with premises has been previously notified of three or more violations of ordinance within any consecutive 12-month period in respect to the emission of dense smoke, soot, cinders, fly ash, dust, or noxious acids, he shall be notified to show cause before the Commissioner of Health why the equipment causing such violations should not be sealed. Upon hearing, if Commissioner finds that adequate corrective measures have not been employed to correct the cause of such condition, then it shall be his duty to seal the equipment until such time as a permit and certificate have been applied for and issued for the premises. /Ordinance No. 160, sec. 206D/.

D. Unlawful Acts

1. Breaking seal of boiler or heating apparatus that has been duly sealed by Commissioner of Health unless authorized by Commissioner in writing. /Ordinance No. 160, sec. 206D/.

2. Any person who refuses to comply with or assist in the violation of the Ordinance, or who in any manner, hinders, obstructs, delays, resists, prevents, or in any way interferes with Commissioner of Health or police officers in the performance of their duties, or refusing to permit inspection by refusing them

entrance to any premises at reasonable hours, or refusing the inspection of such building, establishment, premises or enclosures is guilty of misdemeanor. /Ordinance No. 160, sec. 206E/.

E. Procedure

1. Defenses

In proceeding under ordinance, it shall be a good defense, if the person charged with the unlawful emission of smoke, fly ash, soot, cinders, dust or noxious acids shall show to satisfaction of the court or jury trying the action that an adequate supply of smokeless solid fuel is not available, and that there is no known practicable device, appliance, means or method by the application of which to his premises the emission or discharge complained of could have been prevented. /Ordinance No. 160, sec. 206G/.

2. Appeals

/a/ Person aggrieved by any decision, ruling or order of Commissioner of Health may appeal to Advisory and Appeal Board within 10 days by filing with Commissioner a notice of appeal directed to Board, specifying the relief prayed for. Commissioner to transmit to Board all papers constituting the record upon which the decision, order or order appealed from is taken. Board to fix reasonable time for hearing of the appeal and to give notice to all parties interested and to decide the appeal within a reasonable time. The appeal acts as stay of any decision, ruling or order until approved, modified or set aside by the Board. Party may appear by attorney. Board after hearing appeal must affirm, modify or set aside action of Commissioner. Person aggrieved by decision of Board may appeal to Baltimore City Court. /Ordinance No. 160, sec. 206C/.

/b/ Owner or operator of any fuel-burning plant may file written complaint to Commissioner against any decision, ruling or order of the Commissioner. Complaint to set forth that it is impossible in the operation of the apparatus, either by alteration, repair or addition to operate in complete compliance with the requirements of ordinance. Commissioner to file the complaint with Advisory and Appeal Board which shall set a time for hearing of complaint and give notice. After hearing Board may vary or modify the application of any of the regulations or provisions of ordinance relating to fuel-burning plant so that the spirit of ordinance may be observed, the public health, welfare and safety secured and substantial justice done. In exercising powers Board may reverse, or affirm, wholly or in part, or may modify the order, requirements, decision or determination appealed from and may make such order, requirement, decision, or determination as ought to be made and to that end the Board shall have all the powers of the Commissioner. /Ordinance No. 160, sec. 206G/.

/c/ Person desiring to appeal decision or order of the Commissioner may request Air Pollution Reference Committee to review the facts of the case and upon such request, the Commissioner shall obtain advice of such committee, which advice shall be considered by, but not binding upon the Commissioner. /Ordinance No. 358, sec. 7G/.

/d/ Prosecutions for violation of ordinance or rules or of regulations, notice or order promulgated thereunder shall be maintained unless, at the initial stage the prosecution shall have been authorized and directed by the written order of the Commissioner, and filed with the papers in the proceeding. Any person aggrieved by a decision, rule or regulation of the Commissioner under this Ordinance has the right of appeal to the Baltimore City Court where the case shall be heard de novo. /Ordinance No. 358, sec. 7H/.

/e/ Person dissatisfied with determination of Baltimore City Court, may within 30 days from final order appeal to Court of Appeals of Maryland. /Ordinance No. 358, sec. 7I/.

F. Penalties

1. Violations of ordinance punishable by fine of not less than $25 nor more than $100 for each offense and each day of such violation constitutes a separate offense. /Ordinance No. 160, sec. 206F/.

2. Refusal or neglect to comply with terms and provisions of notice to control or remove emission is misdemeanor punishable by fine not to exceed $100 and each day's violation is a separate offense. /Ordinance No. 358, sec. 7D/.

3. Failure to comply with provisions of ordinance or regulations promulgated thereunder is misdemeanor punishable by fine not to exceed $100 and each day's violation shall constitute a separate offense. /Ordinance No. 358, sec. 7J/.

VI. Preventive Programs

A. Permits

1. No new fuel burning plants nor reconstruction, nor remodeling of any existing fuel burning plants for producing power and heat, or refuse burning equipment, nor any chimney or furnace connected with such fuel or refuse burning equipment shall be installed, erected, reconstructed or remodeled until plans and specifications have been filed by the owner, contractor or installer or other person in the office of and approved by the Commissioner as being so designed that the same can be managed and operated to conform to provisions of ordinance and prevent air pollution and a permit issued by him for such installation, erection, reconstruction or remodeling. Plans to show the type of installation, the amount of work and amount of heating to be done by such fuel or refuse burning plant and all appurtenances thereto, including all provisions made for the purpose of securing complete combustion of the fuel or refuse to be used and the manner in which it is to be burned for the purpose of preventing air pollution. Plans and specifications also to contain statement of the rate of burning and the kind of fuel or refuse proposed to be used and the manner in which it is to be burned; plans and specifications shall show that the room or premises in which fuel or refuse burning plants shall be located is provided with doors, windows, air shafts, fans or other means of ventilation sufficient to prevent the temperature of room from rising to a point higher than 120 degrees F; and sufficient also to provide that the atmosphere of any such room may be changed at least every ten minutes. Plans are to show the dimensions of such room in which fuel or refuse burning apparatus is to be located, the location and dimensions of all chimneys and smoke stacks used in connection with fuel or refuse burning plant. Upon inspection and approval of plans and specifications Commissioner shall issue permit for the installation or for construction, erection, reconstruction or remodeling of fuel or refuse burning plant. As soon as Commissioner has issued permit, it is the duty of various departments having charge of inspection of premises to cooperate with Commissioner to see that the execution of the work so authorized is in conformity with the plans and specifications submitted and approved and with the standard rules and regulations of ordinance. /Ordinance No. 160, sec. 205/.

2. Unlawful to use any new, reconstructed or remodeled plant, or any plant duly sealed for the production and generation of heat and power, or for burning refuse until a certificate shall have first been procured from the Commissioner certifying that the plant is so constructed that it will do the work required with the type of fuel and equipment used; and that in the opinion of Commissioner it can be consistently so managed in burning the type of fuel in the manner specified in the permit, so that no dense smoke shall be emitted from the chimney connected with the furnace or firebox in violation of ordinance; and a notice of the size, type, kind and manner of burning the fuel has been prominently displayed and permanently attached to the plant. The issuance and delivery of any permit or certificate for the construction, reconstruction or remodeling of any plant or chimney connected with a plant shall not be held to exempt any person from prosecution on account of the emission of dense smoke, fly ash, soot, cinders, dust or noxious acids caused or permitted by such person. /Ordinance No. 160, sec. 206/.

3. Person desiring to construct, alter, install or relocate any equipment process structure or space or to change any process involving such equipment structure or space where there is reasonable ground to believe that there may result a condition of air pollution dangerous or detrimental to the health or safety of the public or which may interfere unreasonably with the comfort of the public, shall make written application to Commissioner for a City Health Department survey of the proposed construction, operation or process. Application to be accompanied by any data needed by the Commissioner to determine the composition of the final emission. Construction, operation or process cannot be proceeded with until the satisfactory completion of survey and written permission for such construction, operation or process has been given by the Commissioner; provided that whenever in the opinion of the Commissioner such permission should not be given, written notice of such intention shall be given to the applicant at or before the expiration of 30 days and the applicant shall be given an opportunity to be heard by the Commissioner as to why permission should be granted. If Commissioner fails to grant or deny the written permission within 30 days of receipt of application and other data, the applicant may proceed with the proposed construction, operation or process. Any denial is to be accompanied by the reasons therefor. /Ordinance No. 358, sec. 7C/.

VII. Miscellaneous

Buildings Engineer is not to issue permit for erection, construction, reconstruction or alteration of any building or structure wherein the plans show any chimney or smoke stack until such plans have been submitted to Commissioner and the dimensions of such chimney or chimney approved by him as having sufficient capacity and suitable for the type of equipment and fuel to be used. Commissioner shall not approve plans or issue permits for the installation of any fuel burning device of the surface burning type unless the fuel to be used in such device will be a smokeless fuel type or a mechanical fuel burning device. /Ordinance No. 160, sec. 206A/.

BOSTON, MASS.

I. Ordinance: Area of Jurisdiction.

Rules and Regulations Metropolitan Air Pollution Control District, including the cities of Arlington, Belmont, Boston, Braintree, Brookline, Cambridge, Canton, Chelsea, Dedham, Everett, Lynn, Malden, Medford, Melrose, Milton, Needham, Newton, Peabody, Qunicy, Revere, Sangus, Somerville, Stoneham, Wakefield, Waltham, Watertown, Weymouth, Winchester, Winthrop, and Woburn. Rules and Regulations pursuant to Section 142B, Chapter 111, General Laws of Massachusetts, effective August 1, 1961.

II. General Statement

These Rules and Regulations list general and specific prohibitions for emissions; provide for certain permits; and restrict the use of certain fuels.

"Atmospheric pollution" is defined as the presence in the ambient air of one or more air contaminants or such combinations and of such duration as to cause a nuisance; be injurious or potentially injurious to human or animal life, vegetation, or property; or unreasonably interfere with the comfortable enjoyment of life and property or business.

"Person" is defined to include a department, bureau, agency, political subdivision, or any other entity recognized by law as the subject of rights and duties.

III. Administrative Organization

Department of Public Health of Massachusetts has the duties to approve plans, issue permits, grant certain variances for smoke emissions, and approve the use of certain fuels. /Regs. 3, 4, 5 and 6/.

IV. Applicability

A. Sources See IV-B.

B. Specific Pollutants

1. No person owning, leasing or controlling the operation of any air contamination source shall permit the emission of such quantities of air contaminants which will cause, by themselves or in conjunction with other contaminants, a condition of atmospheric pollution. /Reg. 2/.

2. No person shall cause or allow the emission of smoke the density of which is equal to or greater than No. 3 Ringelmann, or equal to or greater than No. 2 Ringelmann for more than six minutes in one hour. The Department of Public Health may grant permission to emit smoke in excess of these limits, but shall not permit the emission of smoke of a density equal to or greater than No. 2 Ringelmann for more than 20 minutes in one hour, but not exceeding during said 20 minutes, No. 3 Ringelmann or greater for four minutes. /Reg. 6/.

C. Fuel Standards

1. The only solid fuels to be used in the District shall be coke, and anthracite or bituminous coal having a volatile content of not greater than 26 percent by weight on a dry basis; except:

/a/ The use of wood and/or paper is permitted during the building of a new fire.

/b/ Other solid fuels may be used in hand-fired furnaces provided the prior written approval by the Department of Public Health is obtained and provided further, that the use thereof does not result in violation of any other provision of these regulations. /Reg. 4.1/.

V. Enforcement

No provisions in these Rules and Regulations.

VI. Preventive Programs

A. Any person selling bituminous coal for use in the District shall certify in writing the volatile matter of said coal. /Reg. 4.2/.

B. Burning Permits

No person shall cause or permit open burning except by permission granted pursuant to Section 13 of Chapter 48 of the General Laws or to Chapter 355 of the Acts of 1943. Except as, provided below, no such permit or permission shall be valid unless approved by the Department of Public Health, and the Department of Public Health may impose additional restrictions on the provisions of such permit or permission.

1. The approval of such permit or permission may be in writing or by written or stamped endorsement thereon, except verbal approval may be granted in case of emergency.

2. The provisions do not apply to fires for:

/a/ The reduction of leaves.

/b/ The reduction of domestic rubbish by the occupants of premises on which the rubbish originated and which premises contain no more than three dwelling units.

3. These provisions do not apply to:

/a/ The operation of devices using open flames, such as tar kettles, blow torches, welding torches, portable heaters, and other flame making implements, or

/b/ The setting and maintenance, by contractors and tradesmen, of miscellaneous small fires necessary in such activities as street paving work or installation or repair of sewer, water, telephone, electric, or gas mains and services. /Reg. 3/.

C. Plans

The following facilities shall not be constructed, reconstructed or thereafter operated without written approval by the Department of Public Health of final plans.

1. Incinerators having a nominal rated capacity of 10 tons /short/ or more per 24 hours of continuous operation, or a horizontal combustion grate area /equivalent/ of 10 square feet or more. The approval shall be limited to matters which may affect the ability of the facility to perform its intended function or which may affect the degree of air contamination created thereby.

2. Thermal energy utilization units and appurtenances having an energy input capacity of at least 100,000,000 B.T.U. per hour. Approval shall be limited to matters which may affect the degree of air contamination from the unit's use. /Reg. 5/.

NATICK, MASS.

I. Regulation

Chapter XIII - Rules and Regulations for the Control of Atmospheric Pollution, November 14, 1958.

II. General Statement

These Rules and Regulations were adopted under the authority of Section 31C of Chapter III of the General Laws of Massachusetts. They set forth the emissions prohibited, the fuels prohibited and provide for inspections, installation permits, and penalties for violations. The definition of person includes a department, bureau, agency, political subdivision, or any other entity recognized by law as a subject of rights and duties.

III. Administrative Organization

The Board of Health of Natick.

IV. Applicability

A. Sources

A stack shall be sufficiently above the roof of the premises of which it is a part and be far enough from any nearby premises to prevent the creation of an "air pollution nuisance" to adjoining property.

B. Specific Pollution

Contamination of the ambient air to the extent that it constitutes a nuisance, is injurious to human, plant or animal life or to property or which unreasonably interferes with enjoyment of life or property is prohibited.

1. Discharging from any fuel-burning equipment or premises into the air dust in gases which exceed 0.85 pounds per 1,000 pounds of gases, adjusted to 12 percent carbon dioxide content is prohibited, except that in no case shall more than 15 percent of the total measured before entering the collection device be emitted from the stack. The Test Code of the A.S.M.E. is the measurement standard. /sec. 2 A/.

2. The emission of smoke of a density equal to or greater than No. 2 Ringelmann, except for six minutes in any one hour, is prohibited, provided that smoke

the density of which is equal to No. 3 Ringelmann may be emitted for three minutes in any 15 minutes when a new fire is being built or when an equipment breakdown occurs and it is evident that the emission was not reasonably preventable. Soot blowing of boilers and flues must comply with this. /sec. 2 B/.

3. "No person shall cause, suffer or allow to be discharged into the ambient air in any state or combination thereof sulfur compounds, calculated as sulfur dioxide /SO2/, exceeding 0.4 percent by volume in concentration at the point of discharge."

C. Fuel Standards

Use of solid fuel, the volatile matter content of which is 23 percent or more calculated on a moisture free basis, for hand-firing of surface burning types of equipment is prohibited. /sec. 3/.

V. Enforcement

A. Equipment or installations which emit air contaminants shall be provided with reasonably located sampling holes and closures, so that the extent to which air contaminants are being emitted can be determined. /sec. 5/.

B. Interference with the Board of Health or its agents, or refusing them entrance to property containing equipment or open fires emitting or suspected of emitting air contaminants into the ambient air is prohibited. /sec. 7/.

C. Penalties

A fine of not more than $100 may be imposed on any person who continues to cause, suffer or allow a violation of those Rules and Regulations after he has been notified and ordered to abate such violation by the Board of Health. All persons responsible for such violations shall be individually and collectively liable for fines. /secs. 8 and 10/.

VI. Preventive Programs

A. Permits

An application for installation permit, stating means for compliance with these Rules and Regulations, must be filed with the Board of Health, and an installation permit must be issued by the Board of Health before any person constructs, reconstructs, installs or alters any equipment capable of emitting air contaminants. /sec. 6/.

B. The following equipment, repairs and systems are excluded from the above permit requirements:

1. Oil-fired space heating equipment using Nos. 1 and 2 fuel oil when standard commercial equipment is used.

2. Gas-fired space heating equipment when standard commercial equipment is used.

3. Solid fuel-fired space heating equipment when standard commercial equipment is used and the maximum fuel input will not exceed 350,000 BTU per hour.

4. Equipment which is not permanently installed in a stationary building or structure.

5. Normal operating repairs or normal operating alterations to previously approved equipment or to equipment installed prior to the effective date of these Rules and Regulations.

6. Household incinerators. /sec. 6/.

BATTLE CREEK, MICH.

I. Ordinance

Compiled Ordinances of the City of Battle Creek, sections 2.221 through 2.237, 1 September 1954.

II. General Statement

An ordinance to establish a division of air pollution regulation; to provide for an air pollution engineer, advisory board, and appeal board; to regulate the construction, installation, alteration, and inspection of fuel-burning and accessory equipment; to regulate the density of smoke, and the amount and type of fumes, dust and soot discharged; to require that certain records be maintained relating to the sale of solid fuels, and the sale or leasing of fuel-burning equipment; and to prescribe penalties for violations. Government corporations, departments, bureaus and agencies fall within its purview.

III. Administrative Organization

A. Division of Air Pollution Regulation, within the Department of Public Works, headed by the Air Pollution Engineer, appointed by the Director of Public Works with the approval of the City Commission. His duties include:

1. Administration of the Division.

2. Investigation of complaints, making of inspections and observations.

3. Issuance of permits, certificates, and notices.

4. Examination of plans for construction, installation, and alteration of fuel-burning equipment.

5. Publication and dissemination of information on methods of smoke and other air pollution reduction.

6. Enlisting the cooperation of civic, technical, scientific, and educational societies.

7. Prepare and promulgate, with the approval of the Advisory Board and the City Commission, rules and regulations for the installation and operation of fuel-burning equipment and all other equipment susceptible to use in such manner as to violate the provisions of this ordinance. /secs. 2.222, 2.223, 2.224/.

B. Advisory Board of 5 members appointed by the Mayor to advise the Air Pollution Engineer and approve rules and regulations. /secs. 2.222, 2.223/.

C. Appeal Board of 5 members appointed by the Mayor. /sec. 2.222/.

IV. Applicability /sec. 2.228/.

A. Sources

Fuel-burning equipment, internal combustion engines, premises, open fire, railroad locomotives, vehicles, stacks, industrial processes.

B. Specific Pollutants

1. Smoke

/a/ of a density equal to or greater than No. 2 Ringelmann may not be discharged for a period aggregating 6 minutes or more in any 30 minutes.

/b/ of a density greater than No. 3 Ringelmann may not be discharged for periods aggregating more than 3 minutes in any 15 minutes when building a new fire, cleaning a fire, or during a breakdown when the emission is not reasonably preventable.

2. Dust /gas borne particles larger than 1 micron in mean diameter/.

/a/ shall not exceed .85/1,000 lbs. of gases, adjusted to 12 percent CO2 content for products of combustion when discharged from fuel-burning equipment or premises.

/b/ shall not exceed .85/1,000 lbs. of gases when discharged from any industrial process, manufacturing operation, material handling or any other source and in no case shall more than 15 percent of the total dust measured before entering any approved dust-collecting device be emitted into the atmosphere. Measurement shall be according to the A.S.M.E. Test Code.

3. Fumes, soot and dust detrimental to the property of others or a nuisance to persons shall not be discharged from any fuel-burning equipment, internal combustion engine, railroad locomotive, vehicle premises, open fire, stack or industrial operation.

V. Enforcement

A. Unlawful Conduct

1. To interfere with the Air Pollution Engineer or the personnel of his Division in the performance of duty or to refuse them entrance to the premises at reasonable hours. /sec. 2.230/.

2. To violate the seal on any equipment sealed by the Air Pollution Engineer without his written authorization to do so. /sec. 2.225/.

B. Inspection

Shall be made annually of all fuel-burning and dust-collecting equipment covered by this ordinance, regardless of whether or not a previous operating certificate has been issued, except

1. internal combustion engines propelling or operating vehicles.

2. railroad locomotives subject to U.S. ICC rules.

3. equipment used in a residence for heating or cooking, or fuel-burning equipment of size and capacity comparable to that used in a single family or two family residence. A certificate of operation, valid for 12 months, shall be issued for all equipment which, upon inspection, has been found to comply with the provisions of this ordinance. /sec. 2.226/.

C. Record Keeping

1. Retail dealers in solid fuels shall keep records of their sales which shall be available for inspection by the Air Pollution Engineer for a period of 2 years.

2. Retail dealers in fuel-burning equipment shall report in writing to the Air Pollution Engineer the sale or lease of every such piece of equipment for use in the city within 10 days from the date of the transaction.

3. Suppliers of solid fuel shall furnish a typical proximate analysis of those fuels to any person requesting one. /sec. 2.229/.

D. Sealing

1. The Air Pollution Engineer is authorized to seal

off any equipment being installed in violation of the provisions respecting installation permits, or being operated without an operating permit. /sec. 2.225/.

2. If it is discovered upon inspection that any equipment cannot be operated in compliance with this ordinance, the Air Pollution Engineer shall notify the owner in writing to take appropriate corrective measures. Failure to comply within 30 days shall be cause for sealing the non-complying equipment. /sec. 2.226/.

E. Procedure

1. After previous notification of 3 or more violations of the standards of emission in sec. 2.228 /see IV above/, the person in charge shall be notified to show cause before the Air Pollution Engineer within 10 days why the offending equipment should not be sealed. He may then appear and be heard. Should he fail to show cause, the equipment may be sealed until an installation permit and an operating permit have been obtained therefor. Each day's violation shall constitute a separate offense. /sec. 2.228/.

2. Appeals may be taken to the Appeal Board by filing notice with the Air Pollution Engineer within 10 days of the decision complained of specifying the grounds of complaint and the relief sought. The Appeal Board shall set a date not less than 5 nor more than 10 days later for a hearing, at which the appellant may appear personally or by agent or attorney. The Appeal shall stay the order until the final decision of the Board, which shall be rendered within 10 days of the hearing. /sec. 2.231/.

F. Penalties

Any person convicted of a violation shall be liable to a fine of not more than $100., or imprisonment for not more than 90 days, or both, and costs. On default of payment, a further sentence of imprisonment may be imposed for a term not exceeding in all 90 days. /sec. 2.333/.

VI. Preventive Programs

A. Installation Permits

1. Required for the construction, installation or alteration of fuel-burning and dust-collecting equipment, except

/a/ internal combustion engines propelling or operating vehicles.

/b/ railroad locomotives subject to U.S. ICC rules.

/c/ maintenance or minor alterations involving no changes in combustion methods and not adversely affecting smoke emission.

/d/ emergency repairs, provided application for a permit is made on the first business day after the work is begun.

2. Applications for permits shall be accompanied by plans and specifications showing

/a/ form and dimensions of the equipment, particularly boilers, furnaces, fuel-burners, stacks and ducts.

/b/ description and dimensions of the space in which the equipment will be located, including the means provided for admitting the air for combustion.

/c/ character of the fuel to be used, maximum quantity to be burned per hour, and operating requirements.

3. Applications shall be acted upon by the Air Pollution Engineer's office within 10 days of filing.

4. The permit issued shall lose its validity if the approved work is not begun within one year of the date of issuance, unless an extension has been granted.

B. Operating Permits

1. Required for all equipment for which an installation permit was required, and equipment repaired in an emergency for which an installation permit had not previously been secured.

BIRMINGHAM, MICH.

I. Ordinance

Ordinance No. 450, April 5, 1954.

II. General Statement

Ordinance regulates emission of dust, gas, mist, vapor and smoke; requires the installation and maintenance of devices for control of air pollution and provides penalties.

III. Administrative Organization

Building Inspector charged with the duty of enforcement of ordinance. /sec. 6/.

IV. Applicability

A. Sources

1. Operation of furnace, process for any purpose, or combustion device for burning of coal or other natural or synthetic fuels unlawful without operating recognized, and approved equipment, means, method, device, or contrivance to reduce the quantity of gas or air borne solids or fumes emitted into open air to the quantity that does not exceed .85 lbs. per 1000 lbs. of the carrying medium at a temperature of 500 degrees F., when the percentage of excess air in the stack does not exceed 50 percent at full load. Measurement to be made according to Test Code for dust-separating apparatus of A.S.M.E. /sec. 5/.

B. Specific Pollutants

1. Smoke

Emission of smoke from any source whatsoever of density equal to or greater than No. 2 Ringelmann for periods aggregating six minutes or more in any sixty minute period, unlawful. /sec. 3/.

/a/ Section 3 not applicable to private residence building in which four or less families are or can be housed, and

/b/ When building a new fire, cleaning a fire, or when breakdown of equipment occurs such as to make it evident that the emission was not reasonably preventable in which case smoke of density no greater than No. 3 Ringelmann permitted for a period of not to exceed 3 minutes in any period of 15 minutes. /sec. 4/.

2. Dust, gases, mists, vapors and smokes

   Emission of dust, gases, mists, vapors or smoke in such places or manner as to be detrimental to any person, or to the public by endangering the health, comfort and safety of any person, or of the public or in such manner as to cause injury or damage to property or business, unlawful. /sec. 2/.

V. Enforcement

A. Abatement

1. Unlawful escape of dense smoke, dust, gases, mists, vapors and smokes is violation of ordinance, and in addition to penalties provided, is subject to abatement by City. /secs. 2, 3/.

B. Unlawful Acts

Hindering or interfering with Building Inspector in the performance of his duty or refusing him access to any premises at all reasonable hours for the purpose of inspection or enforcement. /sec. 6/.

C. Penalty

Violation of any provision of ordinance is a misdemeanor and subject to fine not to exceed $100 or by imprisonment not to exceed 90 days or both. Each day's violation is a separate offense. Institution of proceeding for violation of ordinance shall not impair or invalidate an action for abatement of a nuisance.

VI. Preventive Programs

None.

DEARBORN, MICH.

I. Ordinance

Ordinance No. 49-446, and amendments to March 22, 1956.

II. General Statement

An ordinance to regulate Air Pollution, defined as "the discharging from stacks, chimneys, exhausts, vents, ducts, openings, open bonfires, or material or stock piles, of any smoke, soot, fly ash, cinders, noxious acids, fumes, oxides, injurious gases, vapors, or dust that cause contamination in the air in amounts detrimental to the public health and welfare or to property, in amounts prohibited by this ordinance"; establishing permissible standards of smoke and dust emission; requiring permits, certificates and inspections; regulating the sale and use of solid fuel; setting standards for chimneys, stacks, incinerators, etc., establishing an Appeal Board; imposing fines and penalties, and providing for nuisance abatement.

III. Administrative Organization

A. Smoke Inspector in the Division of Building and Safety in the Department of Public Works. /sec. 2.5/.

General Powers:

a. Make annual inspections.

b. Investigate complaints of violations.

c. Enforce this ordinance under the supervision of the Superintendent of the Division.

d. Advance an educational program for Air Pollution prevention under the supervision of the Director of the Department.

B. Board of Appeals, consisting of 7 members /secs. 2.8, 2.9/.

General Powers:

a. Hear and decide appeals.

b. Grant variances.

c. Investigate the program of enforcement.

d. Adopt rules governing its appeals procedure.

e. Exception may not hear an appeal after a complaint has been filed in a court of competent jurisdiction.

IV. Applicability

A. Sources: Combustion equipment, refuse-burning equipment and dust-separating equipment as specified below /secs. 3.1 through 3.10/.

1. Chimneys and Stacks - shall be of such height to produce sufficient available draft to supply a proper amount of air to burn /without excessive smoke/ the maximum amount of fuel that is to be consumed, and to overcome draft loss or restrictions in furnace, boiler setting, gas passages, damper openings, breechings and stacks. The chimney must be of sufficient cross sectional area to allow the free unrestricted discharge of the products of combustion.

a. The height and dimensions of the chimney for high pressure boilers shall in no case be less than that specified in an official table, unless approved by the Appeals Board.

b. The height and dimensions of the stack for low pressure heating boilers shall in no case be less than that specified in an official table unless approved by the Appeals Board.

c. No stack or chimney shall be installed with less cross-sectional area than that recommended by the manufacturers of the boilers connected thereto.

d. All incinerator stacks and other chimneys, smoke stacks or flues which emit sparks in sufficient amount or size to cause a hazard shall be equipped with a spark arrester of suitable size and construction to prevent the emission of such sparks.

2. Incinerators - are required in all new buildings, except single and two-family residences and other enumerated situations.

a. No incinerator shall burn garbage or food waste so as to create a nuisance. If garbage is burned, secondary fuel is required.

b. Approved fly ash collection facilities need not be furnished on installations where the burning rate of the incinerator does not exceed 60 lbs./hr., unless it can be demonstrated that the discharged amounts of fly ash are in excess of the amounts permitted by this ordinance.

c. All incinerators creating a nuisance under the provisions of this ordinance shall be equipped with gas washing devices, settling chambers, or other approved devices, if the superintendent determines that such will correct the existing nuisance.

d. Structural and fuel specifications are set out in detail in secs. 3.2-B through 3.2-G of this ordinance.

3. Breechings

Of all boiler combustion equipment shall be of sufficient cross-sectional area to prevent excessive gas velocity and to defeat the obtaining of complete combustion, and shall have a minimum number of bends and turns.

4. Draft Fans and Venturi Stacks

a. Induced draft fans may be used provided requirements concerning stack or chimney size and height are observed, and suitable arrangements made for preventing soot, cinder and fly ash emission.

b. The use of Venturi stacks and other stacks or chimneys not covered herein shall be permitted only on approval by the Board of Appeals after hearing.

5. Accumulation of Soot and Fly Ash

Tube areas and gas passages through heating surfaces shall be of sufficient area to permit the ordinary accumulation of soot and fly ash without such restriction to draft as would interfere with smokeless operation of the fuel-burning equipment. Sufficient means must be provided for the removal of soot, fly ash, dust and cinders from the heating surfaces, tube region and gas passages; provided, however, soot, fly ash, dust and cinders shall not be removed therefrom by the use of compressed air, steam or other agency whereby said soot, fly ash, dust or cinders shall be forced through the chimney or stack into the open air in violation of the provisions of this ordinance.

Baffles must be of such design and so installed and maintained as not to interfere with smokeless combustion due to the impinging of flame on heating surfaces where such impingement would result in reduction of temperature below the ignition point of the combustible gas.

6. Furnace Volume

a. A steam boiler furnace or other furnace using hand-method of firing shall be provided with a furnace volume of not less than 1 cu. ft. combustion volume for each rated horsepower or for each 140 sq. ft. equivalent direct radiation capacity.

b. Mechanical stokers shall be provided with a furnace volume of not less than 1 cu. ft. per rated horsepower.

c. Furnaces using fuel oil shall be provided with a furnace volume of not less than 1.50 cu. ft. per rated horsepower or for each 140 sq. ft. equivalent direct radiation.

d. Furnaces using pulverized coal shall not have less than 3 cu. ft. furnace volume per rated horsepower.

e. Wood-refuse burning boilers or furnaces shall maintain a furnace volume of from 6 to 10 cu. ft. per rated horsepower.

f. Refuse-burners and destructor type of incinerators shall maintain a furnace volume of 2 cu. ft. per sq. ft. grate surface.

7. Horizontal Return Tubular Boilers

Not equipped with mechanical stokers shall be so set as to provide adequate combustion facilities, and in no case shall the distance from shell to grate be less than specified in the official table.

8. Power Boilers

Equipped with stokers shall be set in accordance with at least the minimum dimensions set forth in the accompanying table.

9. Air Jets

All high pressure boilers using solid fuel, and not equipped with mechanical stokers or provisions for using pulverized fuel, shall have at least one air jet for each 200 sq. ft. heating surface or fraction thereof. In no case shall there be less than 2 air jets.

Where it is structurally impossible to equip a boiler and furnace with air jets, mechanical stokers shall be installed on all boilers having more than 200 sq. ft. heating surface or 2500 sq. ft. equivalent direct radiation.

10. Smoke Indicators

Mirrors, or similar devices approved by the Smoke Inspector to enable the fireman to observe the top of his stack or stacks from the boiler room at all times shall be provided for all combustion equipment heating boilers of more than 200 sq. ft. of heating surface, or the equivalent, except equipment using gas or electricity as fuel, unless the top of the stack is readily visible without such device. Where the fireman is not in constant attendance, such device shall be of a type which can sound an alarm or flash a signal to attract his attention. /sec. 2.14/.

B. Specific Pollutants

1. Smoke of a density equal to or greater than No. 2 Ringelmann may not be emitted from any source whatever, except:

a. Residences of less than 4 dwelling units.

b. Smoke equal to, but not greater than No. 2 Ringelmann may be emitted for not more than 4 minutes in any 30 minutes.

c. Smoke equal to but not greater than No. 3 Ringelmann may be emitted for not more than 3 minutes in any 15 minutes when combustion equipment is being cleaned or a new fire built. /sec. 2.2/.

d. Observation shall be not less than 100 ft. nor more than 1/4 mile from the smoke observed. /sec. 2.6/

e. Smoke from any railroad locomotive or roundhouse shall not be greater than No. 2 Ringelmann, except:

/1/ Smoke equal to but not greater than No. 3 Ringelmann is permitted for 1 minute in any 15 minute period when the locomotive is in service.

/2/ Smoke equal to but not greater than No. 3 Ringelmann is permitted for periods aggregating 3 minutes in every 15 minutes when building a new fire, or when equipment breakdown in the roundhouse renders prevention of the emission unreasonable. /sec. 2.12/.

2. Fly ash, soot, and air-borne solids shall not exceed 0.20 grains/cu. ft. of the carrying medium when corrected to a temperature of 500 degrees F, and adjusted to 50 percent excess air at full load, measured according to the A.S.M.E. Test Code for dust-separating apparatus or other recognized standard. For incineration units up to 60 lbs./hr. per sq. ft. of grate area, the allowable discharge shall not exceed 0.30 grains/cu. ft. of the carrying medium when corrected to 500 degrees F and adjusted to 50 percent excess air at full load. Railroad locomotives are excepted from this regulation. /sec. 2.4/.

C. Volatility

A smokeless solid fuel shall be one whose volatile content is 23 percent or less on an ash and moisture free basis; or one of higher volatility which meets the same standards with respect to smoke production, after the Division has reviewed plans and specifications, and made appropriate tests, at the expense of the person submitting the fuel. /sec. 31.3/.

Hand fired combustion equipment in residences of not more than 4 one family dwelling units is exempted from this volatility standard for fuel. /sec. 1.3/.

Solid fuels not meeting these requirements may be used in approved mechanical combustion equipment if the Division is satisfied that the combination of fuel and combustion equipment complies with the provisions of this ordinance. /sec. 32.16/.

V. Enforcement

A. Nuisance

"Air pollution caused by the escape of smoke, soot, cinders, noxious acids, fumes, injurious gases, dust or fly ash as herein defined is hereby declared to be unlawful and to be a nuisance." /sec. 2.1/.

B. Unlawful Conduct

1. To allow the escape, beyond the boundaries of one's own property, of soot, cinders, noxious acids, fumes, injurious gases, fly ash or dust in amounts "injurious to the property of others, or to any person who is outside the boundaries of the property from which said materials are escaping, or to the public; or to endanger the health, comfort, welfare, convenience,

or safety of any such person or of the public; or --- to cause or have a tendency to cause injury or damage to property or persons." /sec. 2.3/.

2. To burn in an open manner, such as wire baskets or drum type containers, materials which are the result of any commercial or industrial operation /excepting single and two-family residences/. /sec. 2.4/.

3. To fail to comply with the provision respecting smoke indicators within 20 days of demand by the Smoke Inspector. /sec. 2.14/.

4. To sell, or otherwise exchange, or to use or consume, any solid fuel for hand firing or intermittent feeding of surface-burning types of equipment, specifically excepting down-draft boilers, which do not meet the standards for smokeless solid fuel. This does not apply to common carriers in the course of their common carrier business. /sec. 2.15/.

5. To use any equipment duly sealed under the provision of this ordinance without a certificate from the division. /sec. 2.23/.

6. To interfere with authorized agents in the enforcement of this ordinance. /sec. 4.1/.

7. To fail to comply, within 30 days, with an order to correct, replace or repair defective equipment detected by the Smoke Inspector at the time of any inspection. /sec. 2.11/.

8. To break a seal imposed by the Department under order of the Board of Appeals. /sec. 2.27/.

C. Inspection

Inspection shall be made annually of all combustion, dust producing, or dust collecting equipment, or any other apparatus or operation which discharges pollutants into the air, except railroad locomotives. On determining that such equipment complies with the provisions of this ordinance, the Superintendent shall issue a Certificate of Operation to be posted in a conspicuous place within the building or plant. /sec. 2.11/.

Applies also to roundhouses and fire-building stations /sec. 2.12/, but not to devices installed to heat buildings used exclusively for private residences. /sec. 2.11/.

D. Sealing - authorized when

1. Plans and specifications are not submitted as required by this ordinance. /sec. 2.22/.

2. A certificate of operation is refused after inspection. /sec. 2.28/.

3. A person who has been notified of 3 or more violations within 12 consecutive months does not show cause before the Board of Appeals, within 10 days of notice to do so, why the offending equipment should not be sealed.

E. Variances - may be granted by the Board of Appeals

1. If warranted by unusual conditions.

2. To construct stacks or chimneys not strictly complying to this ordinance.

3. To burn commercial and industrial wastes openly when to do so will not cause air pollution.

F. Record Keeping /not to be applied to Railroad Locomotives/

1. All persons buying combustion equipment, except repair parts and minor accessories, to be connected to a vent or stack shall report each purchase to the Division, in writing, within 7 days thereof. /sec. 2.17/.

2. No person shall purchase solid fuel without informing the fuel dealer of the type of combustion equipment for which it is intended and the type of fuel specified for use therein under the provisions of this ordinance. The dealer's records shall reflect this information, and he shall not supply any fuel which is not approved for the equipment specified. /sec. 2.18/.

G. Procedure

1. Injunction: Air Pollution as herein defined may be abated by filing injunctive proceedings by the Smoke Inspector. The right to abatement shall be cumulative and in addition to fines and penalties. /sec. 4.2/.

2. Hearings - on sealing orders, see D3 above.

3. Appeals may be taken to the Board of Appeals from any order or determination of the Smoke Inspector, Director, or Superintendent, to be heard within 20 days of filing. /sec. 2.9/.

H. Penalties

Any violation of this ordinance shall be deemed a misdemeanor, on conviction of which the violator shall be subject to a fine of not more than $100, or imprisonment for not more than 30 days, or both. Each day's violation is a separate offense. /sec. 4.3/.

VI. Preventive Programs

A. Installation Permits /not applicable to Railroad Locomotives/

1. Required for the construction, installation, or alteration of any combustion equipment or any equipment pertaining thereto, except: /sec. 2.7/.

a. Maintenance repairs or minor alterations which neither change the capacity or method of combustion, nor cost more than $50.

b. Emergency repairs, provided a permit is obtained on the first business day after the work is begun.

2. Required for the installation, repair, etc., of fuel-burning, refuse-burning, or other dust-discharging equipment, except in buildings used exclusively for residential purposes, containing less than 4 one-family dwelling units.

a. Plans and specifications shall be filed with the Superintendent showing:

/1/ Type of installation.

/2/ Amount of work and heating to be done.

/3/ Provisions for securing complete combustion and smoke prevention.

/4/ Rate and manner of burning, and type of fuel or refuse.

/5/ Location and dimension of stacks, and location and dimensions of area to house the equipment.

b. After the permit is issued, other inspectors in the Department shall cooperate in seeing that the work is done in conformity with the approved plans and specifications.

B. Certificate of Operation /not applicable to Railroad Locomotives/.

1. Required for the operation of any combustion

equipment.

2. Shall be issued only after the installation has been approved by the Smoke Inspector.

3. Renewable annually after inspection and approval by the Smoke Inspector.

DETROIT, MICH.

I. Ordinance

City of Detroit, Ordinance No. 167-E, with amendments, rules and regulations, August 14, 1947.

II. General Statement

An ordinance to control atmospheric pollution, defined as "discharging from stacks, chimneys, exhausts, vents, ducts, openings or open bonfires, of any smoke, soot, fly ash, cinders, noxious acids, fumes, oxides, gases, vapors or industrial dusts that cause atmospheric contamination in amounts detrimental to the public health and welfare", by establishing standards of permissible emission, regulating sources, requiring records of fuel and fuel-burning equipment sales, providing for installation permits and operating artificates, and prescribing penalties for violations.

III. Administrative Organization

Department of Buildings and Safety Engineering and its Commissioner, through a Bureau of Air Pollution and a Board of Appeals within the Department, have administrative responsibility.

Advisory Board of 5 members appointed by the Mayor is established to advise the Commissioner on all Rules and Regulations of the Bureau and on technical points concerned with the enforcement of the Ordinance, but its recommendations are not binding on him. /sec. 2.29/.

IV. Applicability

A. Sources

1. Open burning of rubbish, refuse, leaves, grass, wood, paper and garbage without special approval by the Bureau. /sec. 2.3/.

2. Chimneys and Stacks

/a/ Shall be of such height as to produce sufficient available draft to supply a proper amount of air to burn smokelessly, the maximum amount of fuel that is to be consumed and to overcome draft loss or restrictions in furnace, boiler setting, gas passages, damper openings, breechings, and stacks. /Minimum acceptable height and dimensions are tabulated for high pressure boilers and low pressure heating boilers, respectively/. /sec. 3.1/.

/b/ Shall be of sufficient cross-sectional area to allow the free unrestricted discharge of the products of combustion, and never less than that recommended by the manufacturer of the boiler connected thereto. /sec. 4.1/.

/c/ Shall have no openings other than for the breechings and a clean-out door. /sec. 4.1/.

/d/ Shall be equipped with a spark arrester if emitting sparks in hazardous size or amount. /sec. 4.1/.

/e/ Shall be constructed in accordance with Article 22 of the Building Code. /sec. 4.1/.

/f/ Permission may be granted for the construction and use of stacks and chimneys with equipment using gaseous or liquid fuels without strict compliance with the above, provided, they shall otherwise comply with this Ordinance, and cannot be used with solid fuel-burning equipment in a manner violative of this Ordinance. /sec. 4.1/.

/g/ Induced draft fans may be used where necessary, provided the requirements herein are not violated. The use of Venturi stacks shall be determined on their merits by the Commissioner. /sec. 4.4/.

/h/ Breechings shall be of sufficient cross-sectional area to prevent excessive gas velocity and to defeat the obtaining of complete combustion; and shall have a minimum number of bends and turns. /sec. 4.3/.

3. Fuel-burning Equipment

/a/ Tube areas and gas passages through heating surfaces shall be of sufficient area to permit of the ordinary accumulation of soot and fly ash without such restriction to draft as would interfere with smokeless operation of the fuel-burning equipment. Sufficient means must be provided for the removal of soot, fly ash, dust and cinders from the heating surfaces, tube region, and gas passages. Baffles must be of such design and so installed and maintained as to not interfere with smokeless combustion due to the impinging of flame on heating surfaces where such impingement would result in reduction of temperature below the ignition point of the combustible gas. /sec. 4.5/.

/b/ Furnace volume requirements for coal, fuel oil, pulverized coal, wood-refuse, horizontal boilers shall be as follows. /sec. 4.6/.

/1/ steam boiler or other hand-fired furnaces - not less than 1 cu. ft. combustion volume for each rated horsepower, or for each 140 sq. ft. equivalent direct radiation capacity.

/2/ mechanical stokers - not less than 1 cu. ft. per rated horsepower.

/3/ furnaces using fuel oil - not less than 1.50 cu. ft. per rated horsepower or for each 140 sq. ft. equivalent direct radiation.

/4/ furnaces using pulverized coal - not less than 3 cu. ft. per rated horsepower.

/5/ wood-refuse burning boilers or furnaces - from 6 to 10 cu. ft. per rated horsepower.

/6/ refuse-burners and destructor type incinerator - 1 cu. ft. per sq. ft. grate surface.

/c/ Horizontal return tubular boilers not equipped with mechanical stokers shall be so set that the distance from shell to grate is no less than specified in the table provided. /sec. 4.7/.

/d/ Power boilers equipped with stokers shall be set in accordance with the minimum dimensions set forth in a table provided in the ordinance. /sec. 4.8/.

/e/ Forced draft fans may be used if arrangements are made for preventing soot, cinder, and fly ash emission. /sec. 4.9/.

/f/ Incinerator shall be equipped with gas washing devices, settling chambers, or other approved apparatus where the Department finds such necessary to insure compliance with this Ordinance. /sec. 4.2/.

/g/ "All high pressure boilers using solid fuel and not equipped with mechanical stokers of provisions for using pulverized fuel shall have at least one air jet for each 200 sq. ft. H.S. or fraction thereof", and never less than two air jets, installed at or under the direction of an inspector of the Bureau. If it is structurally impossible to equip a boiler and furnace with air jets, mechanical stokers must be installed on all boilers having more than 200 sq.

ft. H.S. or 2,500 sq. ft. equivalent direct radiation. /sec. 4.10/.

/h/ One of the following means whereby the person attending the fire can observe the emission of smoke from the stack without leaving the boiler room shall be required for all boiler plants, except those using gas fuel and/or electricity, and coal-burning boilers of twenty horsepower or 2,500 sq. ft. of equivalent direct radiation or less. /sec. 4.11/.

/1/ A window or other opening providing an unobstructed view of the top of the stack.

/2/ A mirror or series of mirrors reflecting the top of the stack into the boiler room.

/3/ A smoke indicator approved by the Bureau.

4. A person shall not build, erect, install, or use any article, machine, equipment or other contrivance the use of which, without resulting in a reduction in the total release of air contaminants to the atmosphere, reduces or conceals an emission. /sec. 4.12d/.

5. Domestic Refuse-Burning Equipment

/a/ It is unlawful, except for common carriers in the course of their business, to import, sell, offer for sale, exchange, deliver or install any type of domestic refuse-burning equipment which has not been approved by the Bureau or for the burning of a type of refuse other than the types for which it has been approved. /sec. 2.6A/.

/b/ After testing*, the Bureau shall list each make, model, or type of equipment approved and designate the approved use as one of the following four categories. /sec. 2.6B1/.

Type A - outdoor equipment for ordinary paper or similar material only.

Type B - indoor equipment for ordinary paper or similar material only.

Type C - rubbish incinerator for ordinary paper, rags, floor sweepings or similar material only.

Type D - domestic incinerator for burning rubbish and garbage.

/* The Bureau has printed an outline of the tests to be used in approving indoor equipment - Types B, C, and D./.

/c/ All approved equipment, except Type A, shall bear a plate or tag identifying the equipment and the category of use for which it has been approved. /sec. 2.6B2/.

/d/ Regulations for the testing of indoor refuse-burning equipment, Types B, C, and D /revised 27 August 1956/ have been issued by the Department of Buildings and Safety Engineering, pertaining to fly ash emission, smoke, and odors.

/e/ Design and Installation Requirements set forth in regulations revised 27 August 1956 govern:

/1/ chimney construction
/2/ flue size
/3/ chimney height
/4/ clean-out doors
/5/ draft control
/6/ draft tests
/7/ draft diverters
/8/ dampers
/9/ vent connectors
/10/ combustible partitions
/11/ incinerator clearances
/12/ location
/13/ foundation mounting
/14/ ventilation
/15/ piping
/16/ service shut-off
/17/ spark arrestor

6. Commercial and Industrial Incinerators

Construction, Design and Installation Requirements to set forth in regulations printed 1 May 1961 govern:

/a/ incinerators, breechings, stacks
/b/ smoke pipe materials of construction and lining
/c/ spark arrestor construction
/d/ top charge
/e/ collectors
/f/ settling chamber
/g/ settling chamber ratio

/h/ collectors
/i/ gas burners
/j/ draft control
/k/ overfire air
/l/ burning rate
/m/ wooden boxes
/n/ food handling establishments
/o/ chimney height
/p/ chimney flue size
/q/ smoke pipes: clearance, installation, interconnection, flue entry, size, number
/r/ spark arrestor and location
/s/ negative pressure
/t/ air supply
/u/ mounting
/v/ work space

7. Locomotives /sec. 2.23/.

/a/ Where the Department finds it necessary, solid fuel-burning locomotives or other power equipment shall be equipped with proper combustion devices or other suitable equipment.

/b/ Where the Department finds it necessary, all engine houses in which steam locomotives are repaired, serviced, cleaned and/or housed, shall be equipped with a "direct steaming" or "fuelless" system or a collector and gas washing system.

B. Specific Pollutants

1. Smoke

Maximum density permitted is less than No. 2 Ringelmann except:

/a/ equal to, but not greater than No. 2 Ringelmann for 4 minutes in any 30 minutes.

/b/ equal to, but not greater than No. 3 Ringelmann for 3 minutes in any 15 minutes when building a new fire, or when breakdown of equipment makes it unavoidable. /sec. 2.2A/.

2. Dusts

/a/ Fuel-burning equipment shall be operated in conjunction with approved devices for reducing the quantity of gas or air-borne solids emitted to no more than 0.30 grains per ft. 3 at 500 degrees F. when the percentage of excess air in the stack does not exceed 50 percent at full load. /Railroad locomotives exempted/. /sec. 2.4/.

/b/ Any ferrous foundry cupola melting up to 50 tons per hour of cast iron shall be considered to meet particulate matter emission requirements of this ordinance if at full load operating conditions the total gas or airborne particulate matter emitted into the open air does not exceed .03 grains/ cubic foot of the carrying medium at 70 degrees F. /sec. 4.12/.

3. Soot, cinders, noxious acids, fumes, gases, fly ash and industrial dust shall not be emitted in such quantity as to be detrimental to or to endanger any person or the public, or to cause injury to property or business. /sec. 2.2B/.

C. Volatility

1. Solid fuels for handfiring or intermittent feeding of surface-burning types of equipment may not be imported, sold, exchanged, transported, used or consumed unless they meet the following standards.*

/a/ a volatile content of 23 percent or less on an ash and moisture-free basis. /sec. 2.6/.

/b/ fuels of greater than 23 percent volatile content if they meet the same standards respecting smoke production, determined by:

/1/ submission to the Bureau of complete specifications of the fuel and its processing or manufacture.

/2/ submission to the Bureau of an adequate supply for testing its value as a smokeless fuel.

/3/ field tests of firing, where necessary. /sec. 1.35/.

* /these prohibitions do not apply to line locomotives and to common carriers in the course of their business, and the fuel standards do not apply to buildings of not more than 4 one-family dwelling units./

2. Solid fuel not meeting the requirements of this ordinance for a smokeless solid fuel may be used or consumed only in mechanical combustion equipment or devices approved by the Bureau after inspections and tests prove that such combination complies satisfactorily with the provisions of this ordinance. /Line locomotives are excepted/. /sec. 2.7/.

3. The Bureau has published an outline of the test to be used in approving hand-fired coals, specifying equipment, facilities and procedures. /Edited No. 1, 1958/.

V. Enforcement

A. Nuisance

Any emissions prohibited herein are declared to be a nuisance and may be summarily abated by the Commissioner or his duly authorized representative. /sec. 2.1/.

B. Unlawful Conduct

1. For anyone whose certificate of registration has been suspended, revoked or not renewed to engage in the business of installing incinerators. /sec. 2.10C/.

2. To break a seal of any equipment that has been duly sealed by the Commissioner or his authorized representative. /sec. 2.20b/.

C. Inspection /not required for railroad locomotives/.

1. Every furnace or other combustion device shall be inspected annually, except:

/a/ those installed in buildings used exclusively for private residences containing less than 3 dwelling units.

/b/ those used exclusively for private residences which do not contain a central heating plant. /sec. 2.17/.

2. All equipment subject to annual inspection shall also be required to have a certificate of operation. /sec. 2.16/.

D. Record Keeping

1. All persons purchasing combustion equipment, except repair parts and minor accessories, which require connection to a vent or stack shall report the purchase of every such article to the Bureau, in writing. Railroad locomotives, and wholesale transactions made for the purpose of resale, are exempted from this requirement. /sec. 2.8/.

2. All persons purchasing fuel for use or consumption shall first inform the fuel dealer of the type of

combustion equipment in which it is to be used, and the type of fuel specified for use in such equipment under the provisions of this ordinance. Fuel dealer's records shall indicate the type of equipment and the type of fuel specified by the purchaser and supplied by the dealer. No fuel dealer shall supply fuel not approved for the purchaser's equipment. Railroad locomotives are exempted from this requirement. /sec. 2.9/.

E. Period of Grace

May be granted by the Commissioner for a period not exceeding 6 months to a violator who has produced satisfactory evidence that he has taken all steps necessary to future compliance but that the acquisition of the proper device or equipment cannot be effected immediately. Such action must be approved by resolution of the Common Council. /sec. 2.27/.

F. Sealing

1. If any work for which a permit is required is begun before plans and specifications therefor have been approved, the Bureau is authorized to seal the offending equipment. /sec. 2.13/.

2. After any person has been notified of 3 or more violations within 12 consecutive months, he shall be notified to show cause, not less than 10 days later, why the offending equipment should not be sealed. At a date fixed he may appear and be heard by the Commissioner of Buildings and Safety Engineering. /sec. 2.20/.

3. Except in the case of railroad locomotives, when a certificate of operation is denied on original or annual inspection, the equipment may be sealed immediately. /sec. 2.21/.

G. Procedure

1. Any person aggrieved by a decision of the Commissioner may appeal to the Board of Appeals of the Department of Buildings and Safety Engineering. The appeal shall be filed with the Commissioner within 10 days of the decision appealed from, specifying the grounds thereof and the relief sought. The Board shall fix a reasonable time for the hearing and give due notice to all interested parties.

2. The appeal shall serve to stay the decision in question.

3. The appellant shall deposit a fee with the Bureau, to be refunded if the decision rendered is in his favor. He may appear at the hearing in person, or by agent or attorney. /sec. 2.28/.

H. Penalties

Any person convicted of violating this ordinance shall be subject to a fine of not more than $500, or imprisonment for not more than 90 days, or both. Each day's violation shall constitute a separate offense. /sec. 3.2/.

VI. Preventive Programs

A. Permits /not required for railroad locomotives/.

1. Fuel-burning plants permit required for installation, erection, reconstruction, repair or addition to new plants, existing plants, and stacks and furnaces connected thereto, excepting

/a/ Railroad locomotives.

/b/ Emergency repairs, provided a permit is requested on the first business day after the work was begun.

/c/ Major repairs to an already approved plant, provided the work is reported to the Bureau within 3 days after it is begun. /sec. 2.10/.

2. Refuse

Burning equipment and stacks connected therewith shall not be installed, erected, reconstructed, repaired, added to or operated without a permit. When such equipment is to be vented into a chimney, flue, stack or breeching that also serves other combustion equipment which uses gas or oil as a fuel, it shall be installed only by persons qualified by and registered with the Bureau, or by a gas or oil contractor licensed by the Safety Engineering Bureau. /secs. 2.10A and 2.10B/.

3. Plans and specifications filed with applications for permits shall show: /sec. 2.11/.

/a/ Type of installation.

/b/ Amount of work and heating to be done by the equipment.

/c/ Provisions made for securing complete combustion and air pollution prevention.

/d/ Rate of burning, kind of fuel or refuse to be used, and manner of burning.

/e/ Dimensions of the room which will house the equipment, and location and dimensions of all stacks to be used therewith.

/f/ Any other data the Bureau may require.

4. Upon inspection and approval of the plans, and payment of the required fees, a permit shall be issued and it shall then become the duty of the other departmental agencies having charge of inspecting the premises to cooperate with the Bureau in seeing that the work authorized is done in conformity with Department standards. /sec. 2.12/.

5. No permit shall be issued for any equipment of the surface-burning type unless the fuel to be used is a smokeless solid fuel, or a mechanical fuel-burning device is to be used of a type which will not permit, the escape of air pollutants. /sec. 2.19/.

6. No building permit shall be issued for the construction, reconstruction, or alteration of any structure the plans for which show a stack connected therewith, unless the Bureau has approved the dimensions of the stack as having sufficient capacity and being suitable for the type of equipment and fuel to be used. /sec. 2.18/.

B. Certificates /not required for railroad locomotives/.

1. No new, reconstructed or repaired plant, or plant which has been sealed pursuant to this ordinance, shall be operated until it has been certified by the Bureau to be capable of being operated in compliance with the terms of this ordinance. /sec. 2.14/.

JACKSON, MICH.

I. Ordinance

Ordinance No. 141 - May 26, 1930.

II. General Statement

An ordinance to control the emission of dense smoke or the ingredients thereof from specified sources, or any building, structure or premises whatsoever, by establishing a standard for smoke density and imposing penalties for emissions in excess thereof.

III. Administrative Organization

A. Smoke Inspector, appointed by the City Manager, who shall:

1. Inspect smoke nuisances.
2. Notify offenders and assist in smoke prevention.
3. Serve notice on parties responsible for objectionable emissions.
4. Make complaints of violations to the proper court. /sec. 1/.

IV. Applicability

A. Sources

Locomotive, steam-roller, steam-derrick, steam-pile driver, steam shovel, tar kettle, asphalt kettle, fuel or refuse burning device, or any building, structure or premises.

B. Specific Pollutants

Smoke

The emission of dense smoke, or the ingredients thereof i.e. equal to or greater than No. 3 Ringelmann, is prohibited and is declared to be a nuisance, except:

1. For 20 minutes in any 1 hour, once every 24 hours, when a new fire is being kindled in or about a cold boiler, cold furnace, or other device.
2. For a period aggregating 9 minutes in any 1 hour and not exceeding 5 minutes of continuous emission.

3. For a period aggregating 12 minutes in any 1 hour and not exceeding 5 minutes of continuous emission from any locomotive.

V. Enforcement

A. Penalties

Any person convicted of a violation shall be subject to a fine of not more than $50, or imprisonment for not more than 30 days, or both.

Continuous or repeated violations extending over a 7-day period shall be considered separate offenses for each 7-day period.

LANSING, MICH.

I. Ordinance

Lansing Code, Article II of Chapter 21 Air Pollution, effective date November 13, 1958.

II. General Statement

An article regulating the emission of dense smoke and the escape of solids, vapors, fumes and gases; to create an Air Pollution Control Board; and to prescribe penalties for violations.

Air pollution is defined as the presence in the atmosphere of substances in quantities which are injurious or detrimental to human, plant or animal life, or to property values, or unreasonably interfere with the comfortable enjoyment of life or property or are offensive to the senses. /sec. 21-15/.

III. Administrative Organization

A. Air Pollution Control Board appointed in accordance with City Charter, consisting of eight members, who may adopt such rules and regulations as it deems necessary. The Board shall appoint an Engineer whose duties shall include the following:

1. To investigate all complaints of violations referred to him and report his findings to the Board.

2. To prepare and disseminate appropriate educational and informative literature to the public for the purpose of promoting controlled air pollution.

3. To do any and all other acts as directed by the Board which may be necessary for the successful prosecution of the purposes of the article. /secs. 21-19 to 21-21/.

B. Air Pollution Appeal Board, consisting of a quorum of the Air Pollution Control Board, to provide a hearing for aggrieved persons and to consider evidence and the views of uninterested parties. /sec. 21-22/.

IV. Applicability

A. Sources /See IV B/.

B. Specific Pollutants

1. Smoke

Of a density equal to or greater than No. 2 Ringelmann from any source whatever for a period of ten minutes in a given hour is prohibited. /sec. 21-16/.

2. Solids, vapors, mists, noxious acids, fumes and gases in such quantities, and in such place or manner as to be detrimental to any person or to the public, or in such manner as to cause or have a tendency to cause injury or damage to property or business is prohibited. /sec. 21-18/.

V. Enforcement

A. Abatement

1. The emission of dense smoke and the escape of solids, vapors, mists, noxious acids, fumes and gases, in quantities in excess of that permitted by the Article, are declared to be a public nuisance and may be summarily abated by the Board or by anyone whom it may designate for such purpose. /sec. 21-16/.

B. Unlawful Conduct

1. To permit the emission of dense smoke in violation of the provisions of the Article. /sec. 21-16/.
2. To permit or cause the escape of solids, vapors, mists, noxious acids, fumes and gases in violation of the provisions of the Article. /sec. 21-18/.

C. Penalties

Any person found violating the provisions of the Article shall be fined as provided by the City Code, sec. 1-8. Offenses on separate days shall be deemed to be separate offenses. Any abatement provided for shall be in addition to any penalties prescribed.

VI. Preventive Programs

None.

MUSKEGON, MICH.

I. Ordinance

Sections 8-301 through 8-304 of the City Code.

II. General Statement

The Ordinance provides for the appointment of a Smoke Inspector and sets forth his duties. It also states the smoke emission prohibitions and penalties for violations.

III. Administrative Organization

Smoke Inspector appointed by the City Manager. The Smoke Inspector has the duty to make inspections, notify offenders, assist in the prevention of air pollution, and to make complaints of violations in the proper court. /sec. 8-301/.

IV. Applicability

A. Sources /See IV-B/.

B. Specific Pollutants

Emission of smoke, equal to or greater than No. 3 Ringelmann or the ingredients thereof into the atmosphere that may be detrimental to public health and welfare or damage property, from any locomotive, steam-roller, steam-derrick, steam-pile driver, steam-shovel, tar-kettle, asphalt kettle or from any fuel- or refuse-burning device or from any premises is declared a nuisance and is prohibited; provided, that the emission of such smoke or the ingredients thereof for 20 minutes in any one hour, once every 24 hours, when a new fire is being kindled in or about a cold boiler, furnace or other device is not a violation, and provided that the emission of such smoke for nine minutes in any one hour and not exceeding five continuous minutes is not a violation, and provided further that the emission of such smoke from any locomotive for 12 minutes in any one hour and not more than five continuous minutes is not a violation. /sec. 8-302/.

V. Enforcement

A. Penalty

$50 fine or 30 days imprisonment or both. Repeated violations over a seven-day period are considered one violation. /sec. 8-304/.

PONTIAC, MICH.

I. Ordinance

Ordinance No. 910, effective June 19, 1936.

II. General Statement

An ordinance declaring that the emission of dense smoke, or ingredients thereof, within or into the city limits in such quantities as to be detrimental to public health, is a public nuisance and prohibited; to establish an advisory board; and to prescribe penalties for violations.

III. Administrative Organization

A. Building Inspector of Pontiac, Michigan. His duties shall include:

1. Enforcement of ordinance.
2. Instruction of public with regard to ways and means whereby violations may be avoided.
3. Advising public as to properties of fuel best adaptable to various conditions.
4. Advising public with regard to various types of fuel-burning apparatus.
5. Maintaining file of each and every case involving smoke abatement. /sec. 3/.

B. An Advisory Board consisting of City Manager, Chief of Fire Department, City Engineer and Director of Public Health. The Advisory Board's duties shall include:

1. Rendering decisions on disputed questions of a technical nature arising under the Ordinance.
2. Formulation and printing of such rules, regulations, and recommendations deemed necessary for abatement of dense smoke. /sec. 4/.

IV. Applicability

A. Sources

Any fuel- or refuse-burning device, locomotive, steamroller, steam derrick, steam pile driver, steam shovel, tar kettle, or asphalt kettle. /sec. 1/.

B. Specific Pollutants

1. Smoke

/a/ of a greater degree of darkness than the No. 1 scale of the "Standard Smoke Tester" or "Umbrascope" is prohibited, except that

/1/ the emission of dense smoke for a period of twenty minutes in any one hour, once every twenty-four hours, when a new fire is being kindled in or under a cold boiler, cold furnace or other device, shall not constitute a violation, and

/2/ the emission of dense smoke for a period aggregating six minutes in any one hour and not exceeding two of continuous emission shall not constitute a violation, and

/3/ the emission of a dense smoke from any locomotive for a period aggregating twelve minutes in any one hour and not exceeding five minutes of continuous emission shall not constitute a violation. /secs. 1, 2/.

V. Enforcement

A. Nuisance

The emission of dense smoke and /or/ ingredients thereof as shall be detrimental to public health is declared to be a public nuisance and prohibited. /sec. 3/.

B. Penalties

Any person, firm or corporation violating the provisions of the Ordinance, and upon conviction thereof, be punished by a fine of not more than $100, or imprisonment for not more than 90 days, or both; continuous violations extending over a twenty-four hour period shall be considered separate offenses for each such period. /sec. 6/.

MINNEAPOLIS, MINN.

I. Ordinance

Chap. 180 "Regulation of Atmospheric Pollution", Minneapolis Code of Ordinances, eff. October 13, 1961.

II. General Statement

Ordinance regulates chimney heights and locomotives, and prohibits emission of smoke, dust, gases, vapors, fumes and odors. Air Pollution Control Engineer enforces ordinance. Installation and operating permits required and inspections are to be made.

III. Administrative Organization

A. Division of Air Pollution Control, subdivision of Department of Buildings. /sec. 180.020/.

B. Chief Air Pollution Control Engineer, appointed by Inspector of Buildings. /sec. 180.020/. Chief Air Pollution Control Engineer responsible for administration of Division and for the enforcement of the Chapter, under the supervision and direction of Inspector of Buildings, and:

1. Investigation of complaints, making of observations of polluted air conditions, and taking necessary and proper steps to abate the nuisance therefrom.

2. Issuance of permits, certificates and notices. Keeping copies of applications, plans, permits and certificates, records of violations, complaints, and other records on file.

3. Examination of plans for all new buildings pertinent to operation of fuel-burning equipment and for the alteration of all existing buildings or equipment in order to assure that they are in accordance with the rules and regulations established by Chapter.

4. Examination of application and plans for the construction, installation or alteration of any fuel-burning equipment or any equipment pertaining thereto and if found to meet the requirements of the rules and regulations to approve them.

5. Inspection of all fuel-burning and dust-collection equipment under the jurisdiction of Chapter and, when found to comply with its provisions, the issuance of an operating permit.

6. Publication and dissemination of information on methods of air pollution reduction.

7. Enlistment of the cooperation of civic or technical, scientific and educational organizations. /sec. 180.030/.

IV. Applicability

A. Sources

1. Chimney Height

Stacks or chimneys serving fuel-burning plants having more than 400,000 BTU or 12 H.P. capacity, and all incinerators serving commercial or industrial establishments or multiple dwellings containing more than 4 dwelling units shall extend at least 10 feet above the highest point of any roof within a radius of 50 feet of such chimney.

Any existing stack, chimney or vent violating sections 180.110 to 180.150 /see IV B/ may be required to comply with these minimum requirements. But chimney height requirements may be waived by Chief Air Pollution Control Engineer if special abatement equipment is installed to control emissions in compliance with sections 180.110 to 180.150. /sec. 180.170/.

2. Locomotives, Roundhouses, Etc.

/a/ All railroad roundhouses or fire-building stations shall be so equipped that fires may be built and steam raised in cold locomotives without the production of smoke of a density greater than No. 3 Ringelmann for a period of more than 9 minutes in one hour. All locomotives stationed at such locations shall be equipped with devices by means of which fires may be cleaned; fires built; and steam raised in cold locomotives without the production of smoke of that density for a period of more than 9 minutes in one hour. Term "cold locomotive" means locomotive in which the fire has been withdrawn or extinguished.

/b/ No locomotive or vehicle of any kind shall emit smoke of a shade or appearance greater than No. 2 Ringelmann for more than 3 minutes in any 15 minute period, or No. 3 Ringelmann for more than one minute in any 15 minute period. Paragraph not applicable when fire is being cleaned or when the fire is being built as provided in paragraph /a/, or in emergencies or when breakdown of equipment occurs that makes it evident that the emission could not be reasonably prevented.

/c/ No vehicle of any kind shall emit smoke the shade or appearance greater than No. 3 Ringelmann for more than 3 minutes in one hour when a fire is being built or for a period or periods aggregating one minute in any 15 minute period when operating.

/d/ Air Pollution Control Engineer may require any vehicle used permanently or temporarily in the city to be equipped with approved devices for smoke elimination if it violates paragraph /c/. /sec. 180.240/.

B. Specific Pollutants

1. Emissions Prohibited

Emission into open air of any foreign materials such as dusts, gases, fumes, vapors, smokes, and odors in quantities which, by reason of their objectionable properties, shall be considered a nuisance because they do one or more of the following:

/a/ Injure, or are sufficient to injure, the health or safety of any person or the public.

/b/ Create an obnoxious odor in the atmosphere.

/c/ Cause damage to property or inconvenience to the general public.

/d/ Create a nuisance or hazard by obscuring vision.

/e/ Have a deleterious effect upon trees, plants or other forms of vegetation.

2. Smoke

No person shall cause, suffer, or allow discharge from any fuel-burning equipment, internal combustion engine, premises or open fire, except railroad locomotives or vehicles, smoke the shade or density of which is equal to No. 2 Ringelmann for a period aggregating 4 minutes or more in any 30 minutes, or smoke the shade or density of which is greater than No. 2, but not greater than No. 3 Ringelmann, except for a period or periods aggregating 3 minutes in any 15 minutes except when building a new fire, cleaning a fire, or when breakdown of equipment occurs such as to make it evident that the emission was not reasonably preventable. /sec. 180.130/.

3. Dust-Separating Equipment

No person shall cause, suffer or allow to be discharged from any fuel-burning equipment or premises or to pass any convenient measuring point in the stack, dust in the gases to exceed .85 lbs. per 1000 lbs. of gases adjusted to 12 percent CO2 content, of which amount not to exceed .4 lbs. shall be of such size or be retained on a 325 mesh at U.S. Standard sieve. The amount of solids in the gases shall be determined according to the Test Code for Dust-Separating Apparatus of the A.S.M.E., revised and amended. The test shall not be made when cleaning tubes or fires which shall not be more than 15 minute periods.

Any installation of pulverized fuel-fired boilers or boilers equipped with spreader type stokers or burning solid fuel in suspension regardless of furnace volume or furnace construction, shall be equipped with special fly ash arresting equipment, or mechanical electrical or washing type, the effectiveness of which has been demonstrated to the satisfaction of the Air Pollution Engineer and which will keep the solids discharged in the combustion gases within the requirements of the Code.

It is responsibility of owner of such equipment to provide facilities for sampling stack emissions, including access opening into stacks and platform and power supply for testing equipment. The sampling point shall be at least 3 diameters from any bend or constriction unless an alternative sampling point location is approved by the Chief Air Pollution Engineer. /sec. 180.140/.

4. Dust from Grain Handling

Every person maintaining, using, owning or operating any premises for the storage, loading, unloading or handling of grain, shall so conduct these activities that no particles of grain, chaff, dust, soot, rust or other objectionable substance shall be cast upon property abutting or adjoining, or in the vicinity of the premises, in such a manner or place as to cause injury to health, annoyance or detriment to persons or the public or damage to property or business. /sec. 180.160/.

V. Enforcement

A. Collection of Excess Emissions

Industrial or manufacturing plant causing dust, vapor, mist, odors, or fumes to be emitted in excess of maximum allowable standards set forth by "Industrial Safety Standard, Laws and Codes", as adopted by Industrial Commission of Minnesota, shall be required to collect the substances in a manner approved in writing by the Air Pollution Engineer and the Fire Prevention Bureau. /sec. 180.120/.

B. Smoke Indicators

All solid or liquid fuel-burning plants having more than 400,000 BTU input or 12 H.P. capacity, shall be equipped with smoke indicators, mirrors, or similar devices approved by the Air Pollution Control Engineer, to enable firemen to observe the breeching or the top of stack or stacks from the boiler room at all times, unless the top of stack is readily visible to the fireman from the boiler room without the use of such devices. In plants where a fireman is not in constant attendance in boiler room, and where boilers fired one at a time aggregate more than 1000 sq. ft. of heating surface, the smoke indicator shall be of a type which will sound an alarm or flash a signal to attract the attention of the fireman. Any existing plant which emits smoke of a density greater than permitted in Code may be required to install such indicating devices. /sec. 180.150/.

C. Inspections

An inspection of all fuel-burning equipment having a capacity of 400,000 BTU input per hour, or dust-collecting equipment covered by this Chapter, except railroad locomotives or vehicles, whether or not a previous operating permit has been issued by the Air Pollution Control Engineer, shall be made from time to time to see that such equipment can be operated within the provisions of this Chapter. If at the time of any inspection it is found that the equipment is in such condition that it cannot be so operated, the Air Pollution Control Engineer shall give written notice to the person owning, operating or in charge of such equipment of the defects found and an order to correct, repair, or replace the defective equipment. Failure to comply with the order within 30 days from date is prima facie evidence of a violation. /sec. 180.200/.

D. Hindrance

No person shall hinder Air Pollution Control Engineer or Division personnel in the performance of any duty or refuse inspection at reasonable hours. /sec. 180.250/.

E. Persons Liable

All persons operating or in charge or control of any equipment who shall cause or permit or participate in any violation of the Chapter shall be individually and collectively liable. Issuance, by Inspector of Buildings, of any installation permit or certificate of operation shall not be held to exempt person having permit from prosecution for the emission of smoke, dust, soot and fumes. /sec. 180.260/.

F. Prosecutions

Prosecutions may be instituted by the Air Pollution Control Engineer and shall be prosecuted in the name of the State.

VI. Preventive Programs

A. Installation Permits

1. Construction, installation or alteration of any solid, liquid or gaseous fuel-burning equipment, other than natural gas, having a capacity of over 4000,000 BTU input per hour /12 H.P./ or any equipment pertaining thereto, except railroad locomotives or vehicles, prohibited until application, including suitable plans and specifications of such fuel-burning equipment and structures or buildings, have been filed with and approved by the Air Pollution Control Engineer and an Installation Permit issued by the Inspector of Buildings. /sec. 180.040/.

2. All construction, installation or alterations for which Installation Permit required, shall comply with provisions of Heating Code and the contractors' and workman's license regulations of City. /sec. 180.050/.

3. Plans and specifications to show form and dimensions of fuel-burning equipment and accessories, together with the description and dimensions of the building, or part thereof, in which such fuel-burning equipment is to be located, including the means provided for admitting the air for combustion. The type of fuel to be used, maximum quantity of such fuel to be burned per hour, the operating requirements and the use to be made of such fuel-burning equipment, shall be stated. /sec. 180.060/.

4. Maintenance of minor alterations not changing capacity of fuel-burning equipment and not involving any change in method of combustion or adversely affecting the emission of smoke, dust or fumes, may be made without Installation Permit. Emergency repair may be made prior to application for and issuance of required Permit if serious consequences would result if repair were to be delayed. When repair, in excess of $100 is made in emergency, application for Permit must be filed on first day of business following the starting of such work. /sec. 180.070/.

5. Application to be approved or rejected within 10 days. Upon approval and payment of fees /provided for in sec. 180.220/, Inspector of Buildings shall issue permit for construction, installation, or alteration of fuel-burning equipment. /sec. 180.080/.

6. No construction, installation or alteration shall be made which is not in accordance with plans and specifications and applicable provisions of Building Code, without approval of Air Pollution Control Engineer. /sec. 180.090/.

7. Violation of Installation Permit will be sufficient cause for Air Pollution Control Engineer to stop all work; further work cannot proceed until the Engineer is assured that violation will be corrected and that the work will proceed in accordance with Installation Permit. Each day of work in violation of Permit is a separate offense. /sec. 180.100/.

B. Operating Permits

1. Fuel-burning equipment or dust-collecting equipment or equipment pertaining thereto, except natural gas, cannot be used without an annual operating permit issued by Air Pollution Control Engineer. Permits required and fees paid /provided in sec. 180.230/ for:

/a/ Fuel-burning equipment for heating and power boilers and warm air furnaces having a 400,000 BTU per hour /12 H.P./, or over, input capacity. Permit and fees not to extend to blacksmith forges, annealing ovens, rivet heating equipment and tar kettles.

/b/ Air handling equipment with or without duct work where air is removed from an industrial process or manufacturing plant by action of mechanical fan having total of 5 H.P. or over of connected load, except such air conditioning, and ventilating units which are used for human comfort, air conditioning, humidification, cooling and heating.

2. Application for Operating Permits and renewals must be made on or before September 1 of each year. If applications not made on or before October 1, applicant must pay double fees.

3. Operating Permits must be posted in conspicuous place near unit for which permit issued. Failure to possess Permit is violation of Code.

VII. Miscellaneous

Permit for erection, construction or alteration of any building, plant or structure related in any way to fuel-burning equipment cannot be issued by any department until Inspector of Buildings has issued an Installation Permit covering the equipment, or until the Air Pollution Control Engineer has indicated that in his judgment the plan submitted will permit installation of facilities adequate for compliance with provisions of the ordinance.

ST. PAUL, MINN.

I. Ordinance

Ordinance No. 9275, May 10, 1949.

II. General Statement

An ordinance regulating air pollution, which is defined as dust, fumes, smoke, soot, or other materials that are of such character as to create an uncleanly, destructive, offensive, or unhealthful condition when emitted or allowed to escape into the open air, regulating permissible smoke and dust emission from fuel-burning equipment, internal combustion engines, open fires, locomotives and vehicles; requiring smoke indicators; creating an advisory board; and imposing penalties for violations by any person, including government agencies.

III. Administrative Organization

Advisory Board on Smoke Elimination or Air Purification, consisting of five members appointed by the Commissioner of Public Utilities to advise him with respect to his enforcement of this ordinance. /sec. 2/.

IV. Applicability

A. Sources

Fuel-burning equipment, internal combustion engines, premises, open fires, industrial processes, manufacturing operations, material handling, locomotives and vehicles.

1. Fuel-burning plants having more than 300 sq. ft. of boiler-heating surface /30 H.P./, or its equivalent, shall be equipped with smoke indicators, mirrors, or similar devices to enable the fireman to observe the top of his stack or stacks from the boiler room at all times, unless the top is readily visible without them. If the fireman is not in constant attendance the indicator shall be of a type which, by sounding an alarm or flashing a signal, will attract his attention. /sec. 7/.

2. All new installations of pulverized fuel-burning equipment, spreader stokers, or any similar suspension-burning types shall be provided with dust-separating equipment. /sec. 5e/.

B. Specific Pollutants

1. Smoke

From fuel-burning equipment, internal combustion engines, premises, or open fires. /sec. 5a/.

/a/ shall not exceed No. 2 Ringelmann for 4 minutes or more in any 30 minutes.

/b/ shall not exceed No. 3 Ringelmann except for a period of 3 minutes in any 15 when building a new fire, or when a breakdown shows the emission was not reasonably preventable.

From locomotives and other vehicles. /sec. 6/.

/a/ shall not exceed No. 2 Ringelmann except for no more than 5 minutes in any 1 hour, when building fire and raising steam in a cold locomotive at a railroad roundhouse or fire-building station.

/b/ shall not exceed No. 2 Ringelmann except for no more than 45 seconds in any 6 minute interval, by the operation of locomotives in or ready for service.

/c/ shall not exceed No. 2 Ringelmann for more than 3 minutes in any hour when a fire is being built in any other vehicle, or more than 1 minute in any 15 when it is operating.

2. Dust

/a/ from any fuel-burning equipment or premises shall not exceed 0.85 lbs/1000 lbs. of gases, adjusted to 12 percent CO2 content. /sec. 5b/.

/b/ from any industrial process, manufacturing operation, material handling, or any other source /excepting companies operating Bessemer converters/ shall not exceed 0.85 lbs/1000 lbs. of gases, and in no case shall more than 15 percent of the total dust measured before entering the dust-collecting device be emitted into the atmosphere. /sec. 5c/.

/c/ dust measurement shall be according to the Test Code of the A.S.M.E. "The test shall not be made during the period when tubes or fires are being cleaned. Such periods shall not exceed 15 minutes." /sec. 5d/.

3. Air Pollutants in General

No person shall cause or allow to be discharged from any fuel-burning equipment, internal combustion engine, premises, open fire, stack, or from any other source such quantities of air contaminants or any other material which results in air pollution to a degree which causes injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endangers the comfort, repose, health, or safety of any such persons or the public, or which causes or has a natural tendency to cause injury or damage to business or property. /sec. 5f/.

V. Enforcement

A. Unlawful Conduct

To interfere with the performance of any duty enjoined herein, or refuse admission of inspectors to premises at reasonable hours.

B. Penalties

Any person violating provisions of this ordinance shall be guilty of a misdemeanor, and on conviction thereof, be punished by a fine of not more than $100, or imprisonment for not more than 30 days.

VI. Preventive Programs

None.

KANSAS CITY, MO.

I. Ordinance

Ordinance No. 23272, Chapter 50 of City Ordinances, Nov. 14, 1958.

II. General Statement

This Ordinance creates the Air Pollution Advisory Board and the Board of Appeals; requires installation permits; prohibits certain emissions; provides for the sealing of equipment after repeated violations; and provides for appeals by aggrieved parties.

III. Administrative Organization

Air Pollution Advisory Board with duty to promulgate rules and regulations for the approval of permits and the installation of equipment. /secs. 50.020 and 50.030/.

Commissioner of Buildings and Inspections with the duties to pass upon applications for all permits under this Ordinance, to make inspections for enforcement of this Ordinance, and recommend methods by which equipment can conform to this Ordinance. /sec. 50.040/.

Air Pollution Board of Appeals with the duties to pass on all matters referred to it by this Ordinance, hear appeals from any order, requirement, order or determination by the Commissioner of Buildings and Inspections, and to hear appeals from rules and regulations by the Advisory Board. /sec. 50.090/.

IV. Applicability

A. Sources: /See IV B/.

B. Specific Pollutants

1. No person shall cause or allow the escape from any source such quantities of ash, soot, dust, cinders, chaff, liquids, acid or other fumes, obnoxious gases or odors, dirt, or other material of any kind in such place or manner as to cause injury, detriment, nuisance or annoyance to any person or to cause or have a tendency to cause injury or damage to business or property. /sec. 50.060 /a/ /.

2. No owner or person in charge of any smokestack or any locomotive, tar kettle, steam boiler or contrivance, or any open fire or stack on any premises shall allow the emission of smoke of a density greater than No. 3 Ringelmann, except for six minutes in any hour at the time of cleaning or building fires. /sec. 50.060 /b/ /.

V. Enforcement

A. Notification

The Commissioner of Buildings and Inspections shall promptly notify anyone responsible for a violation of the provisions of this Ordinance, provisions of permit requirements or rules and regulations under this Ordinance and shall make recommendations for correction of the violation. /sec. 50.070/.

B. Sealing

After any person has been notified of these repeated violations of this Ordinance or rules and regulations pursuant to this Ordinance, the Commissioner of Buildings and Inspections may notify such person to show cause before him within ten days from notification why the equipment should not be sealed. If, after such opportunity for hearing, the Commissioner finds that reasonable corrective measures have not been taken in good faith, he shall have the authority to seal the equipment ten days after notification of the determination that the equipment will be sealed. Such responsible person may, within ten days of the decision to seal, appeal such decision. Such seal shall be removed whenever the Commissioner is satisfied that reasonable corrections have been made or that future violations are improbable. /sec. 50.080/.

C. Variance

The provisions of IV B shall not apply during periods of temporary breakdown of equipment, provided repairs are promptly undertaken and the Commissioner of Buildings and Inspections is immediately notified. /sec. 50.060 /d/ /.

D. Procedure

Any person aggrieved by any rule, regulation, standard, order, requirement, decision or order made in the enforcement of this Ordinance may appeal to the Board of Appeals within ten days of the effective day of the aggrieving act by filing a notice of appeal with the Commissioner of Buildings and Inspections and the Board of Appeals. Such appeal shall stay the action of the Commissioner or Advisory Board. The Board of Appeals shall notify all parties concerned of the appeal. The Board of Appeals has the power to make such decision as it deems fit to effectuate the purposes of this Ordinance. /secs. 50.100 and 50.110/.

E. Penalties

None.

Violations of IV B, V B and VI are misdemeanors. /secs. 50.060 /c/ and 50.050/.

VI. Preventive Programs

No person shall install, erect, alter or reconstruct any fuel- or refuse-burning equipment or any chimney connected thereto until he has applied for and received a permit from the Commissioner of Buildings and Inspections. The Commissioner shall issue if such installation is in conformance with this Ordinance. /sec. 50.050/.

ST. JOSEPH, MO.

I. Ordinance

General Ordinance No. 3242 /Feb. 2, 1953/; Chapter 10, Art. XVIII of Municipal Code.

II. General Statement

Ordinance regulates emission of dense smoke and prohibits the escape of soot, cinders, dust, noxious acids, fumes and gases. It creates a Board of Air Pollution Control and provides for summary abatement by the Boiler Inspector. Board must pass upon construction, reconstruction, alteration and addition of fuel-consuming devices. Pollution is declared to be a public nuisance and penalties for violation of ordinance are provided.

III. Administrative Organization

A. Board of Air Pollution Control of 5 members created which is appointed by Mayor. Board has power to pass upon plans and specifications for construction, reconstruction, addition and alteration of fuel-consuming devices and to review rulings of Boiler Inspector. It may extend period of grace granted by the Inspector. /secs. 10-395, 10-399, 10-401, 10-402/.

B. Boiler Inspector is empowered to abate nuisances summarily. He has authority to grant temporary permits for continued operations of non-complying equipment. The Inspector has power to inspect construction, reconstruction, addition and alterations of fuel-consuming devices to determine compliance with ordinance. /secs. 10-396, 10-398, 10-399, 10-401/.

IV. Applicability

A. Sources - /see IV B/.

B. Specific Pollutants

1. Smoke

Emission of smoke from any source of density equal to or greater than No. 3 Ringelmann unlawful and declared to be a public nuisance subject to summary abatement by Inspector. /sec. 10-396/.

Exceptions:

/a/ Private residences housing no more than two families.

/b/ When firebox, furnace, boiler, locomotive or other fuel-consuming device is being cleaned out and new fire being built, in which event smoke of density greater than No. 3 Ringelmann permitted for 6 minutes in any single period of 60 minutes.

/c/ Locomotives may not emit smoke of density of No. 3 Ringelmann for period in excess of one minute in any 60 minutes if locomotive is ready to be put in service or is in service.

/d/ When in interest of public health and welfare and due to emergency outage of boiler or furnace, it becomes necessary to overload remaining boilers or furnaces, usual penalties shall not apply. Operator must notify Inspector whenever emergency will cause smoke in violation of ordinance for more than 6 minutes in any 60 minutes.

/e/ When firebox, furnace, boiler, locomotive or other fuel-burning device equipped for multiple fuel burning is being changed from one fuel to another, smoke of density greater than No. 3 Ringelmann permitted for period not to exceed 6 minutes in any single 60 minute period. /sec. 10.397/.

2. Soot, cinders, dust, noxious acids, fumes and gases

Allowing escape of such quantities of above pollutants, in such place or manner as to be detrimental to any person or to the public or to endanger the health, comfort and safety of such person or public, or in such manner as to cause or have a tendency to cause injury or damage to property or business is unlawful and declared to be a public nuisance subject to summary abatement by the Inspector. /sec. 10-398/.

V. Enforcement

A. Nuisance

Emission of smoke in excess of standards and allowing escape of pollutants listed in IV B, 2 are declared to be public nuisances and subject to summary abatement by the Inspector. /secs. 10-396, 10-398/.

B. Procedure

1. Appeal

Any disagreements over ruling of Inspector, subject to review by Board upon appeal. Person desiring to appeal ruling of Board may appeal to circuit court of county in same manner as appeal from Board of Adjustment. /sec. 10-402/.

2. Period of Grace

When it has been adequately demonstrated to the Inspector that compliance with ordinance cannot be effectively and immediately made, Inspector has authority to grant temporary permit for continued operation of non-complying equipment but only in the event that all necessary steps have been taken to secure compliance with ordinance. Temporary permit issued for no longer than 6 months at the end of which permittee deemed in violation of ordinance, unless period of grace extended by Board upon proper showing of an attempt to comply. /sec. 10-401/.

C. Penalties

Violation of ordinance leads to fine not to exceed $500 for each violation, and imprisonment not to exceed 6 months, or both. Offenses on separate days are deemed separate offenses. Any abatement provided for is in addition to penalties prescribed. /sec. 10-403/.

VI. Preventive Programs

A. Plan Approval

New fuel-burning plants cannot be installed or erected until plans and specifications have been filed by owner, contractor, installer or other person, with Inspector, in such detail as to enable Inspector and Board to pass on its conformity with ordinance. Reconstruction, addition or alteration to any existing fuel-burning plants, or connected stacks or furnaces, for production of power and heat, or for refuse burning, can be made until approval of such reconstruction, addition or alteration is approved by Board.

Before fuel-burning device is approved, Inspector must inspect the construction, reconstruction, addition or alteration of fuel-consuming device 30 days after completion, to determine whether the device complies in operation with code.

Compliance with this section of ordinance not deemed to be compliance with other city requirements with respect to construction and repair of buildings. /sec. 10-399/.

ST. LOUIS, MO.

I. Ordinance and Regulations

Ordinance No. 50163, January 24, 1961; Stoker Regulations, 1945; Oil burner Regulations, 1957; Over Fire Air Regulations, 1946; Incinerator and Destructor Regulations, 1956; Sources of Solid Fuel Regulations, 1952.

II. General Statement

The ordinance and the regulations control the emission of air pollutants, establish the Division of Air Pollution Control and the Board of Air Pollution Control, provide for installation permits, sealing of equipment, appeals, and penalties for violations. "Air Pollution" is defined as the presence in the atmosphere of gaseous, liquid or solid matter, or odors. Person includes any agency or bureau.

III. Administrative Organization

A. Division of Air Pollution Control in the Department of Public Safety headed by the Commissioner of Air Pollution Control who is to be appointed by the Director of Public Safety. Board of Air Pollution Control of five members to be appointed by the Mayor with the duty to advise the Commissioner.

B. Commissioner of Air Pollution Control shall have charge of enforcement of all ordinances pertaining to air pollution control and inaugurate prosecutions for violations thereof, he shall investigate complaints, make inspections, and adopt rules and regulations as may be necessary. /sec. 7/.

IV. Applicability

A. Sources

1. Steam railroads or locomotives shall use smokeless solid fuel or be equipped with mechanical fuel burning devices. Electric or internal combustion engine driven locomotives may also be used. These provisions shall apply to all locomotives in service or being prepared for service in transfer, yard or switching operations, but shall not apply to road engines which are serviced so as to enable them to comply with this ordinance with regard to the emission of smoke. /sec. 12/.

2. Stoker Regulations

/a/ In order to estimate net load due to heating water for domestic use the Heating, Piping and Air Conditioning Contractors National Association-s methods are accepted.

/b/ Stokers shall be installed with clear heights conforming to the regulations. The minimum clear height increases as maximum burning rate increases.

/c/ Bituminous stoker sizes must conform to a standard which is based on a comparison of total net load and hand fired rating.

/d/ Requirements for stoker sizes in warm air furnaces are defined.

/e/ Dead plate type stokers with burning rate of 100 lbs. of coal per hour or over must have some approved method of preventing off period smoke. All stokers over 150 lbs. per hour shall be so equipped.

/f/ The regulations list special restrictions to which stokers in certain enumerated special boilers and furnaces must conform.

/g/ The type and installation of stoker controls shall be in accordance with the regulations of the National Board of Fire Underwriters and all city ordinances.

/h/ The regulations set forth requirements for minimum ledge distances, chimney sizes, fly ash collectors, ventilation requirements, occasions when barometric dampers are required, cleanout doors, and types of fuel recommended.

3. Over Fire Air Regulations - These regulations are intended to standardize the installation of overfire air systems which are used to control the emission of off-period smoke as provided in IV - A - 2 - /e/ above. The regulations define the standards for the:

/a/ Number and size of jets.

/b/ Spacing of jets.

/c/ Height of jets above tuyeres.

/d/ Port openings.

/e/ Duct work.

/f/ Capacity of fan or blower.

4. Sources of Solid Fuel Regulations - This is a list of all the known solid fuels used in the city as of January 1952. This list is in three parts, i.e., manufactured and processed fuels, coal for hand firing, and coal for mechanical firing.

5. Incinerator and Destructor Regulations

/a/ Before installing or remodeling any incinerator or destructor, plans and specifications must be approved by the Commissioner of Air Pollution Control.

/b/ Gas connections, incinerator rooms, masonry walls, breechings, chimneys, draft regulators, and spark arrestors must conform to certain specifications covered in these regulations.

/c/ When conditions warrant, the Commissioner of Air Pollution Control may require auxiliary equipment for the purpose of reducing the discharge of pollutants to the atmosphere.

/d/ For domestic and small commercial incinerators the regulations set forth the requirements for the setting, the chimney and vents and the permissible types of gas burners to be used therein.

/e/ Flue fed incinerators must conform to the specifications for combustion chambers, combined refuse chute and smoke flue and auxiliary burners. In addition, flue fed incinerators must be provided with approved settling chambers or other methods of removing fly ash that may be approved by the Commissioner of Air Pollution Control.

/f/ Destructors are regulated as to design, required hearth area, furnace settling chamber and the necessity for auxiliary burners. The requirements vary according to the type of refuse to be burned.

/g/ Because of the specific nature of municipal, pathological and special purpose incinerators, applications for permits will be considered on its own merits.

6. Oil Burner Regulations

/a/ Before installing or remodeling any oil burning equipment, plans and specifications must be approved, and a permit must be issued by the Commissioner of Air Pollution Control. These regulations do not apply to portable burners which do not require connection to a flue, such as oil stoves, oil heaters and oil lamps, blow torches, and soldering pots.

/b/ Formula for computing burning rates for steam heating, hot water heating, and warm air heating are listed.

/c/ The design of the primary combustion chamber in the application for permit must conform to the limitations listed for the plan area, the ratio of length to width, the height of center nozzle from floor, and the introduction of secondary air for horizontal rotary burners.

/d/ Combustion volume must be not less than three cubic feet for each gallon of oil to be burned per hour. The volume on the burner side of the bridge wall must not be less than 60 percent of required volume.

/e/ The regulations set out requirements for controls; size, location, composition and controls for piping; permissible sizes of storage tanks depending on their location; fill and vent pipes; and means of producing draft.

B. Specific Pollutants

1. The emission of smoke of a density equal to or greater than No. 2 Ringelmann within the city or within one-half mile of the city, from any combustion device for the burning of fuel or refuse, or from any premises, or open fire or for longer than one continuous minute from any locomotive in or ready for service, is prohibited. Except that No. 2 smoke may be emitted for not more than nine minutes in any hour, and smoke in excess of No. 2 may be emitted for not more than six minutes in any hour, in either case only when the firebox is being cleaned out or a new fire is being built therein. /sec. 13/.

2. The emission within the city or within one-half mile of the city, from any combustion device for the burning of fuel, fly ash or solid particulate matter exceeding 0.85 pounds per 1,000 pounds of gases is prohibited. Of this amount no more than 0.5 pound per 1,000 pounds of gases shall be of a size to be retained on a 325 mesh U.S. Standard

Sieve. These conditions are to be conformed to when the fuel-burning device is operating at full load and the excess air in the gases does not exceed 50 percent. Measurements are to be according to the A.S.M.E. Test Code. /sec. 14/.

C. Fuel Standards

1. It is unlawful to import, sell, offer or expose for sale, exchange, deliver or transport for use and consumption in the city, or to use or consume in the city, any coal with a volatile content in excess of 23 percent on a dry basis except in sizes which will pass through a 2 inch circular opening. Any such coal with an excess of 12 percent ash or 2 percent sulphur on a dry basis as mined, before importation, sale, transportation or use shall have been cleaned by washing so that it contains no more than 12 percent ash on a dry basis, and shall be used only in approved mechanical fuel-burning equipment.

2. It is unlawful to import, sell, offer or expose for sale, exchange, deliver or transport for use and consumption, or use or consume any solid fuel for handfiring or surface burning types of equipment which does not have a volatile content of 23 percent or less on a dry basis. However, processed fuel with more than 23 percent volatile content on a dry basis is acceptable under this section, subject to the following conditions:

/a/ Plans and specifications and such other information as he may require must be submitted to the Commissioner.

/b/ A supply of the finished commercial product must be made available to the Commissioner so that tests may be made to establish its value as a smokeless solid fuel.

/c/ Expenses for tests must be paid by the person whose product is submitted. /sec. 11/.

V. Enforcement

A. Nuisance

1. The emission or escape within the city or within one-half mile from the city from any source, of smoke, ashes, soot, dust, cinders, dirt, grime, acids, fumes, gases, vapors, odors or any substance, in a manner or amounts detrimental to or endangering

to health, comfort, safety or welfare of the public or to cause injury or damage to property or to interfere with business, is declared a public nuisance. /sec. 15/.

2. Before the Commissioner declares a public nuisance, he may conduct a hearing by giving ten day's notice. /sec. 25/.

3. Emissions in violation of IV-B, 1 and 2 are declared a public nuisance and may be summarily abated by the Commissioner. /secs. 13, 14/.

B. Inspections

The Commissioner and employees of the Division of Air Pollution are authorized to enter and inspect at reasonable hours, premises on which they have reason to believe that this ordinance is being violated. In addition, it shall be the duty of the owner or operator of any source of fly ash, dust, soot, cinders, dirt, grime, acids, fumes, gases, vapors, odors or other substances to make tests of such sources at his own expense under the supervision of the Commissioner. /secs. 23, 16/.

C. Sales Reports

It is the duty of all persons engaged in selling fuel and refuse-burning devices to report to the Commissioner every sale of such articles and the location at which the buyer is to use the article. The buyer shall give the seller the address of such location. Employees of the Division of Air Pollution Control are authorized to enter such sellers place of business at reasonable hours and examine all books, papers and records pertaining to such sales. /sec. 20/.

D. Sealing

After any person has been notified of three or more violations of this ordinance within any 12 months, the Commissioner may hold a hearing to determine whether the equipment causing such violations should be sealed. If the Commissioner finds that adequate corrective means have not been employed to correct the cause of the violation, he may seal the equipment until corrective measures have been taken. It is unlawful to break a seal duly affixed. /sec. 24/.

E. Appeals

Any person aggrieved by any decision, ruling or order of the Commissioner may take an appeal to the Board of Air Pollution Control within ten days. Such appeal shall act as a stay of any decision, ruling or order until decided by the Board. The Board may not take any action at variance with this ordinance. /sec. 27/.

F. Penalty

Any person who violates this ordinance or any rule or regulation of the Division of Air Pollution Control or shall in any manner interfere or attempt to interfere with the Commissioner or employees of the Division of Air Pollution Control in the performance of their duties shall be guilty of a misdemeanor, and upon conviction shall be punished as provided in sec. 16 of Chapter one of the Revised Code of St. Louis, 1948. /sec. 27/.

VI. Preventive Programs

A. Registration

It is the duty of all persons owning or operating a potential source of air pollution to register such source with the Commissioner of Air Pollution Control which shall include the location of the point of emission, the cause or source of emission, the composition of the pollutant, its quantity and a description of preventive devices. No new source of air pollution shall be put into operation until such registration is made and unless there is some known means for preventing or controlling such air pollution. /sec. 17/.

B. Permits

No fuel-burning plant, chimney or contrivance to control the emission of air pollutants shall be erected, installed, reconstructed, altered or replaced until plans and specifications have been filed with and approved by the Commissioner of Air Pollution Control and a permit has been issued therefor. Plans and specifications shall show the type of installation, the work to be done, all appurtenances, the kind of fuel or refuse to be burned and the rate of burning, the room in which the burning plant is to be operated and the ventilation of such room, and the means by which air for combustion is to be introduced. The Commissioner shall not issue permits for any surface-burning type of fuel-burning device unless a smokeless solid fuel is to be used therein or a mechanical fuel burning device is used. Any equipment installed, erected, reconstructed, altered or replaced in violation of this section may be sealed immediately by the Commissioner. Emergency reconstruction, alteration or replacement of equipment is not prohibited when the necessity arises outside of the business hours of the Division of Air Pollution Control; provided that a permit for such work is applied for on the first business day thereafter. /sec. 18/.

C. The Building Commissioner shall not issue a permit for the erection, construction, reconstruction, alteration or occupancy of any structure the plans for which include any refuse or fuel-burning device, chimney or smoke stack, or the occupancy of any building for industrial purposes, until the Commissioner of Air Pollution Control has approved the plans and specifications as making adequate provisions for compliance with this ordinance. /sec. 21/.

D. When the Commissioner of Air Pollution Control is satisfied that work done pursuant to a permit issued by him is in conformity to the approved plans and specifications and with the rules and regulations of the Division and can be operated without emissions in violation of this ordinance, he shall affix a label of inspection thereto. /sec. 19/.

E. Fees are charged for the issuance of permits. Rates are based on BTU per hour output. /sec. 22/.

UNIVERSITY CITY, MO.

I. Ordinance

Municipal Code of University City /1950/ Article 702. "Heating Devices and Smoke Elimination".

II. General Statement

Ordinance prohibits dense smoke and the discharge of dust, soot, noxious gases or nuisance substances. Stacks, devices and appliances are regulated. The Director of Public Works is given powers and duties to bring about compliance with ordinance. Permits are required and annual inspections are to be made. Standards are prescribed and penalties provided.

III. Administrative Organization

A. General Inspector is the Director of Public Works. He has the duty to inspect all heating devices or fuel-burning equipment subject to the ordinance; to supervise proper operation of all devices and other contrivances mentioned in ordinance; to issue warrants for the arrest and prosecution of persons in violation of ordinance. /sec. 702.6/.

General Inspector has power to order discontinuance of the use of defective equipment by means of seal /sec. 702.7/; to approve plans and specifications and issue permits for installation or alteration of equipment /sec. 702.8/. He is required to make an annual report to the City Manager and City Council giving full number of boilers in city, number in use, number and kind inspected and number condemned as unsafe for use. He must also report date of every boiler accident, cause and name of owner at first meeting following such accident. /sec. 702.10/.

IV. Applicability

A. Sources

1. Smoke stacks and chimneys

Must be of such height as may be prescribed by ordinance, must have cross-sectional area not less than 20 percent of total grate area of boilers or furnaces to which attached. Stacks and chimneys leading from incinerators and other devices burning trash, paper and rubbish must be covered by substantial wire with meshes not exceeding 1/4 inch in diameter. /sec. 702.4/.

2. Light, heat and power devices

Must meet standard requirements of A.S.M.E., or National Board of Fire underwriters and must be labeled as having been rated or approved pursuant to one of above standards. /sec. 702.15/.

3. Stokers

Coal or coke fed stokers must be of such type and construction as to effectively eliminate smoke, fly ash and other nuisance substances. Sufficient space must be allowed to permit cooling off of clinker and ash for removal. Operation of stoker devices automatically controlled by appliances approved by National Board of Fire Underwriters. Volumes and heights or combustion chambers for furnaces and boilers equipped with stokers for both heating and commercial use must be designed in accordance with accepted practices and existing standards of safety and efficiency to secure complete combustion and prevent air pollution. /sec. 702.16/.

4. Oil-burning equipment

Standards specified for tests and approved before installation, oil flow, automatic ignition, piping valves and unions, electrical installations, dampers, oil storage tanks above ground; oil storage tanks in excess of 250 gallon capacity; construction of underground tanks, gravity or pressure feeds from outside tanks of more than 250 gallon capacity; pressurestatic or automatic devices; oil storage tanks above ground of factories and industrial plants. /sec. 702.18/.

5. Gas-burning devices

All gas-fired devices, furnaces, boilers or appliances used in central heating plants /except those for domestic purposes only/, whether gas-designed or conversion type, must be connected to a chimney. Gas apparatus or contrivances shall be installed in room where normal facilities for ventilation will permit proper combustion of gas. Boilers shall have some safety appliances to work in conjunction with society appliances of burner itself; in no case shall appliances be left off boiler because of safety controls on any part of burner. /sec. 702.19/.

B. Specific Pollutants

1. Dense smoke /defined as smoke of density equal to or greater than No. 2 Ringelmann/

Emission of dense smoke by any heating device or fuel-burning equipment for aggregate time of more than 5 minutes in any one hour. Prohibited; exception: when starting or kindling a fire in a cold boiler or firebox, dense smoke permitted for period not to exceed 10 minutes.

2. Dust, soot, noxious gases or nuisance substances

Discharge from any smoke stack, chimney or by any heating device or fuel-burning equipment in manner /1/ to cause injury, detriment, nuisance or annoyance to any person or to public, or /2/ to endanger comfort and repose, health or safety of any such person or /3/ to cause or have a natural tendency to cause injury or damage to business or property, prohibited.

C. Volatility

1. Coal

Importation, sale, use or consumptionof coal, in sizes which will pass through a 2-inch circular opening, which contains in excess of 12 percent ash or 2 percent sulphur on a dry basis unlawful unless, before importation, it has been washed and after washing coal contains no more than 12 percent ash on a dry basis. Such coal can only be used or consumed in approved mechanical fuel-burning equipment; provided the provisions of section shall not apply to coal with volatile content of less than 23 percent on a dry basis.

2. Solid fuel

Importation, sale, use or consumption of any solid fuel for hand-firing or surface burning types of equipment which does not meet smokeless fuel standards unlawful. Smokeless fuel for purpose of enforcement of ordinance considered a fuel, the volatile content of which is 23 percent or less on a dry basis. Provided, that if a fuel contains volatile matter in excess of 23 percent on a dry basis, it shall be acceptable under this ordinance provided it meets the same standards in regard to smoke production as that of a fuel containing less than 23 percent volatile matter on a dry basis and subject to conditions to ascertain whether standards are met, as follows:

/a/ Complete plans and specifications of process to be submitted to General Inspector as well as any additional information he may reasonably require.

/b/ Adequate supply of finished product to be available to General Inspector to conduct tests to establish its value as a smokeless solid fuel.

/c/ Necessary expenses of tests must be paid in advance. /sec. 702.6/.

V. Enforcement

A. Inspection

1. Annual

Duty of every owner or user of any heating device in any store, hotel, office building, commercial or industrial building and in multiple dwellings occupied by 3 or more families, to have each heating device inspected at least once annually. If device is found by General Inspector to be unsafe or in a condition likely to cause dense smoke, nuisance, fire or explosion he will give notice to change or alter defective part to make it free of such condition. Upon reinspection if device found to be in good condition, General Inspector will issue a certificate of approval which is to be posted conspicuously in engine or boiler room. Fees required. /sec. 702.11/.

2. Devices for producing heat, light and power in commercial buildings

Where such devices are of such size as to require a hammer or hydrostatic test of internal as well as external parts, owner, lessee or user must furnish a certified inspector to inspect and make written report to General Inspector. When owner or user desires inspection to be made by an authorized insurance company, its inspector must make written report to General Inspector. Copy to be given to owner or user, together with certificate of inspection upon payment of fee. Steam boiler inspection company and insurance company authorized to make inspections of steam boilers or generating heating devices shall make quarterly report to General Inspector of all boilers inspected. /sec. 702.12/.

3. Air heating, conditioning and cooling plants

Submitted plans and specifications of air conditioning or cooling plants shall set forth transmission factors for barriers and amounts and sources of loss or gain. Design temperatures and relative humidity shall be recorded for air outside and inside, for condensing air or water and for heat transferring medium. /sec. 702.13/.

4. Incinerators

No incinerators of surface type to be installed in city. Where inside lining burned out or masonry work unsafe, causing fire hazard, or leakage of obnoxious odor, General Inspector shall notify owners or users that device is unsafe or unhealthful and give 10 days to put it in good order. All incinerators except small gas-fired type, shall have enclosing walls of fireboxes or combustion chamber of solid masonry or reinforced concrete not less than 8 inches thick where horizontal area does not exceed 15 square feet and not less than 12 inches thick where combustion chamber is of greater area. Chimneys and flues for all incinerators shall be as specified for any heating device. /sec. 702.14/.

5. Gas-burning devices

All gas-fired devices, furnaces, boilers or appliances used in central heating plants for producing heat or used in connection with production of power, except those for heating water for domestic purposes only shall be inspected; plans and specifications to be submitted to General Inspector for approval. Fees required. Notice for inspection shall be procured at time of issuance of permit and before work commenced; is held by contractor, owner or user and mailed to General Inspector stating date and time inspection wanted. /sec. 702.19/.

B. Procedure

Denial of permit may be appealed to city council which may order granting of permit. /sec. 702.8/.

C. Penalty

Violation of ordinance or interference with General Inspector leads to fine not exceeding $100 for each offense.

VI. Preventive Program

A. Permit

For installation and alterations - Before heating device or fuel-burning equipment is installed, erected, reconstructed, altered, changed or repaired, application with plans and specifications filed with General Inspector. Upon approval he shall issue permit for proposed installation or alteration. General Inspector to inspect device after installation, alteration or repair to see that proposed works is in accordance with plans. /sec. 702.8/.

B. Certificate of Inspection

After completion of inspection, General Inspector to issue certificate of inspection which shall be placed conspicuously in engine, boiler room or basement, if equipment stationary, or where boiler or heating device is operating if transitory. /sec. 702.9/.

OMAHA, NEB.

I. Ordinance

No. 15763. September 30, 1947.

II. General Statement

An ordinance to control air pollution by establishing standards of emission, requiring permits, operating certificates, and annual inspections, and providing penalties for violations. Definition of person includes government corporations, departments, bureaus and agencies.

III. Administrative Organization

Sanitation Commission is charged with the duty of investigating, preventing and abating air pollution and the emission of dense smoke and enforcing the provisions of this Ordinance. It shall appoint a Chief Smoke Regulation Engineer, an Advisory Board of 5 members, and an Appeal Board of 5 members. /secs. 19-10.1 thru .4/.

A. The Chief Smoke Regulation Engineer shall

1. Investigate complaints, make inspections and observations of smoke conditions.

2. Examine plans for new buildings, the alteration of existing buildings, and the construction and alteration of fuel-burning equipment, except locomotives under Federal control.

3. Issue permits, certificates and notices.

4. Inspect equipment for which an installation permit was issued, and inspect fuel-burning equipment annually.

5. Publish information on methods of smoke reduction.

6. Enlist the cooperation of civic, technical, scientific and educational societies. /sec. 19-11.2/.

B. Advisory Board shall advise the Chief Smoke Regulation Engineer and approve or veto the rules and regulations adopted by him, and confer with and advise the Sanitation Commission, the City Council, and the Mayor. /sec. 19-11.4/. Rules and regulations shall be effective when approved by resolution of the City Council. /sec. 19-11.3/.

C. Appeal Board shall hear and decide appeals taken from any decision, ruling, regulation or order of the Chief Smoke Regulation Engineer. /sec. 19-11.11/.

IV. Applicability

A. Sources

Fuel-burning equipment, internal combustion engines, open fires, locomotives, vehicles, premises or stacks.

B. Specific Pollutants

1. Smoke of a density equal to No. 2 Ringelmann shall not be discharged from any fuel-burning equipment, internal combustion engine, or open fire, excepting locomotives or vehicles, for a period aggregating 8 minutes or more in any 30 minutes, or of a density greater than No. 2 except for a period aggregating 3 minutes in any 30 minutes when building a new fire, cleaning a fire, or when breakdown of equipment occurs such as to make it evident that the emission was not reasonably preventable. /sec. 19-11.8/.
2. Smoke of a density equal to No. 2 Ringelmann shall not be discharged from any locomotive or vehicle for a period aggregating 8 minutes or more in any 30 minutes, or of a density greater than No. 2, except for a period aggregating 3 minutes in any 15 minutes when building a new fire, cleaning a fire, or during a breakdown, except for a period aggregating 1 minute in 15 minutes for any reason. /sec. 19-11.8/.
3. Dust in the gases from any fuel-burning equipment shall not exceed 0.85 lb. per 1000 lb. of gases adjusted to 12 percent CO2 content for products of combustion, measured according to the A.S.M.E. Test Code. /sec. 19-11.8/.
4. Fumes that are a nuisance to any person or that are a detriment or injurious to the property of others shall not be discharged from any fuel-burning equipment, internal combustion engine, locomotives, vehicles, premises, open fire or stack. /sec. 19-11.8/.

V. Enforcement

A. Unlawful Conduct

1. To interfere with the Chief Smoke Regulation Engineer or the personnel of his division in the performance

of any duty herein enjoined, or refuse them entrance to premises at reasonable hours. /sec. 19-11.10/.

2. To violate the seal on any equipment sealed at the direction of the Chief Smoke Regulation Engineer without his written authorization to do so. /sec. 19-11.12/.

B. Inspection

Shall be made annually of all fuel-burning equipment except:

1. Locomotives under Federal control.

2. That which is installed to heat individual private residences, or those in which one fuel-burning equipment is used to heat one building containing four or less dwelling units.

3. That which is in buildings which do not have a central heating plant.

A certificate of operation, to be posted in a conspicuous place, shall be issued on a finding that the equipment complies with the provisions of this Ordinance. /sec. 19-11.6/.

C. Record Keeping

Retail dealers in fuel-burning equipment shall report to the Chief Smoke Regulation Engineer, in writing, the sale or lease of every such piece of equipment within 10 days of the date thereof, together with a statement of the address of the building in which it is to be installed and used. /sec. 19-11.9/.

D. Sealing

1. After previous notification of 3 or more violations within a 12 month period, a violator shall be notified to show cause before the Chief Smoke Regulation Engineer, within 10 days, why the offending equipment should not be sealed. If, upon the hearing, at which the violator may appear and be heard, the Chief finds that adequate corrective measures have not been taken, he shall seal the equipment until such time as an installation permit and an operating permit have been issued therefor. The decision may be appealed, and such appeal shall stay the sealing. /sec. 19-11.8/.

2. If at the time of any inspection it is found that fuel-burning equipment cannot be operated within the provisions of the Ordinance, the person in charge shall be given written notice to correct the defect. Failure to do so within 30 days shall be grounds for sealing the equipment. /sec. 19-11.6/.

3. Violation of the installation permit shall be grounds for the Chief to stop all work and seal the equipment until he is assured that the work will proceed in accordance with the permit. /sec. 19-11.5/.

E. Procedure

1. May be taken from any decision of the Chief by filing notice thereof with him, directed to the Appeal Board, within 10 days, specifying the grounds for the appeal and the relief sought. A $20 deposit shall be posted with the appeal.

2. The Board shall set a hearing, not less than 5 nor more than 10 days after filing, at which the appellant may appear personally or by agent or attorney.

3. The appeal shall stay the decision complained of until the final decision, which shall be rendered within 10 days of the hearing. If the decision is reversed, the deposit shall be refunded. /sec. 19-11.11/.

F. Penalties

1. Each day of work in violation of the installation permit, each day of operation previous to obtaining an operating permit, each day, after 30 days, of failure to comply with an order to correct, and each day's violation of the provisions of IV above, shall constitute a separate offense. /sec. 19-11.12/.

2. Violators shall be deemed guilty of a misdemeanor, and on conviction thereof, be fined

/a/ Not less than $10 nor more than $50 for the first offense

/b/ Not less than $25 nor more than $100 for the second offense

/c/ Not less than $50 nor more than $200 for the third and any subsequent offense. /sec. 19-11.13/.

VI. Preventive Programs

A. Permits

1. Required for the construction, installation, or alteration of fuel-burning equipment, and equipment pertaining thereto, except locomotives.

2. Plans and specifications filed with the application shall show

/a/ form and dimensions of the equipment, including the proposed boiler, furnace, fuel-burner, stack and ducts

/b/ description and dimensions of the building or part thereof where the equipment will be located

/c/ the means provided for admitting the air for combustion

/d/ the character of the fuel to be used and the maximum amount to be burned per hour

/e/ the operating requirements and the use to be made of the equipment.

3. Maintenance and minor alterations which do not change the capacity of the equipment and which do not involve a change in the method of combustion or adversely affect emission of pollutants, may be made without a permit, as may emergency repairs which cannot be deferred, provided application for a permit is filed on the first business day after the start of such work.

4. Applications shall be approved or rejected within 10 days of filing.

5. The permit shall become void if the work covered thereby is not begun within one year from the date of its issuance.

6. No equipment for which an installation permit was required shall be used until an operating permit has been issued for it. Operation without the permit shall be grounds for sealing the equipment. /sec. 19-11.5/.

RENO, NEVADA

I. Ordinance

Ordinance No. 1159, amending Chapter 9 of the Municipal Code; adopted May 27, 1957.

II. General Statement

An ordinance to control air pollution, defined as "the emission or escape of dust, fumes, gases, mist, odor, smoke, vapor, or any combination thereof in quantities hereinafter required to be controlled", by prescribing standards, requiring installation permits, and establishing penalties for violations.

III. Administrative Organization

A. Air Pollution Inspector, who shall be the Chief of the Fire Department, and whose obligations and duties are:

1. To investigate complaints and institute proceedings in case of violations.
2. To investigate and recommend needed revisions of this or any other ordinance pertaining to air pollution to City Council.
3. To prepare and disseminate educational literature to the public and to pollutant producers.
4. To cooperate with other organizations interested in the smoke prevention campaign.
5. To promulgate and publish rules and regulations for the enforcement of this Ordinance, subject to the approval of City Council.
6. To issue permits required hereunder.
7. To cooperate and consult with and advise owners and operators of existing industrial burning plants for the purpose of inducing cooperative action in bringing said burning plants within the requirements of this article pertaining to burning plants constructed hereafter. /sec. 9-96/.

IV. Applicability

A. Sources /See IV-B/.

B. Specific Pollutants

Except in cases of unavoidable emergency, it shall be unlawful to permit the discharge into the open air of smoke, dust or gas, vapor, odorous or solid particles from any source whatever, the shade of which is equal to or darker than that specified for the time and duration shown below. /sec. 9-94/.

	Type of Installation	Limiting Density
A.	Domestic installations, primarily for heating and hot water, in one and two family dwellings.	Not darker than No. 1 Ringelmann, except that smoke not darker than No. 3 is permitted for not more than 4 minutes in any 30 minutes when starting a new fire.
B.	Installations primarily for heating and hot water in apartment houses, office buildings, schools, hotels, loft buildings, hospitals and other installations of similar character.	Not darker than No. 1 Ringelmann, except that smoke not darker than No. 3 is permitted for not more than a total of 4 minutes in any period of 30 minutes.
C.	All other stationary installations.	Not darker than No. 2 Ringelmann, except that smoke not darker than No. 3 is permitted for not more than a total of 4 minutes in any period of 30 minutes.
D.	Marine Installations.	Not darker than No. 3 Ringelmann, except that smoke not darker than No. 3 is permitted for not more than a total of 1 minute in any period of 6 minutes.

V. Enforcement

A. Unlawful Conduct

To interfere with the performance of duty of the Inspector or his designe . /sec. 9-97/.

B. Period of Grace

Whenever it has been adequately demonstrated to the Inspector that compliance herewith cannot be effectively and immediately had, he shall have the authority to grant a temporary permit for the continued operation of the non-complying equipment, but only in the event that the party has taken all necessary steps to secure compliance. The permit shall be issued for no longer a period than six months. /sec. 9-98/.

C. Specific Exclusions

1. Existing industrial or commercial enterprises, including the reasonable expansion thereof. Their owners, however, are required to discuss with the Inspector any pollution from their enterprise which exceeds the emissions set forth in IV A above, to the end that, through cooperative action, such excess of emission shall be reduced.

2. Usual farm and agricultural operations known as crop dusting, fertilizing or other like operations, when conducted by hand or by mechanical means. /sec. 9-99/.

D. Penalties

Any person found violating these provisions shall be fined a sum not to exceed $500 for each violation, and may be imprisoned for a period not to exceed 6 months. /sec. 9-101/.

VI. Preventive Programs

A. Installation Permits

Required for the construction, reconstruction, installation or alteration, after the effective date of this Ordinance, of fuel-burning equipment or any other equipment capable of emitting pollutants. They shall be issued by the Inspector after applications identifying the equipment and stating the means provided for securing compliance with this Ordinance have been filed in his office. They shall not be required for:

1. Gas-fired equipment using standard commercial fuel.

2. Oil-fired equipment burning No. 1 and No. 2 fuel oil /as specified in Commercial Standard Specifications for fuel oils of the U.S. Department of Commerce/ when standard commercial equipment is used.

3. Solid fuel - fired equipment when standard commercial equipment is used and the maximum fuel input will not exceed 350,000 B.T.U. per hour.

4. Equipment which is not permanently installed in a stationary building or structure.

5. Repairs and minor alterations to previously approved equipment or to equipment installed prior to the effective date of this article. /sec. 9-95/.

ATLANTIC CITY, N. J.

I. Ordinance

City Ordinance No. 15-1958, August 28, 1958.

II. General Statement

An ordinance regulating the emission of smoke, cinders, fly ash and dust from fuel-burning equipment within the city limits, and to prescribe penalties for violations. Property, which may be the subject of an offense, owned by the federal or state government is within the purview of the Ordinance.

Air pollution is defined as the presence in the outdoor atmosphere of substances in quantities and at locations which are injurious to human, plant or animal life or to property, or which unreasonably interfere with the comfortable enjoyment of life and property throughout the city and excluding all aspects of employer-employee relationship as to health and safety hazards.

III. Administrative Organization

City Health Department

IV. Applicability

A. Sources

Fuel-burning equipment shall mean and include any furnace, marine installation, stationary internal combustion engine, refuse-burning equipment, boiler, apparatus, device, mechanism, incinerator, stack or structure used in the process of burning fuel, refuse, or other combustible material. /sec. 1/.

B. Specific Pollutants

1. Smoke

From any fuel-burning equipment which is darker than No. 2 Ringelmann is prohibited, except that smoke emitted during the cleaning of a firebox or the building of a new fire, which is not darker than No. 3 Ringelmann, for a period or periods aggregating no more than 3 minutes in any 15 consecutive minutes is not prohibited. /sec. 3/.

2. Fly Ash and Dust

Maximum permissible discharge of pounds of fly ash per hour tabulated with reference to the heat content of fuel burned, in B.T.U.'s per hour, except that the prohibition shall not apply

/a/ when the heat in solid fuel burned is less than one million B.T.U.'s per hour, nor

/b/ to marine installations, vehicles, or other movable or portable equipment. /sec. 4/.

V. Enforcement

A. Unlawful Conduct

1. To cause, suffer, allow or permit smoke from any fuel-burning equipment in excess of that permitted by the Ordinance. /sec. 3/.
2. To cause, suffer, allow or permit fly ash and dust caused by the combustion of solid fuel to be discharged from any stack or chimney into the open air in excess of that permitted by the Ordinance. /sec. 4/.

B. Penalties

Upon conviction of a violation, punishment shall be a fine not exceeding $200, or by imprisonment not exceeding 90 days, or both, for each offense. In default of the payment of a fine after conviction, the person convicted of the offense may be imprisoned for a term not exceeding 90 days. /sec. 6/.

VI. Preventive Programs

A. Registration

1. Persons burning solid fuel, whose products of combustion are discharged into the open air from a stack or chimney, shall submit to the City Health Department information relating to place, type of fuel burned, heat in fuel burned, quantity of fuel burned per hour, description of combustion equipment, period of operation, height and size of outlet, and description of dust-removal equipment.
2. Such information shall be submitted to the City Health Department in the case of an existing installation 90 days after effective date of ordinance, and in the case of new or altered installations within 90 days after being placed in service.

3. Additional reports concerning such information may be requested by the City Health Department. /sec. 4/.

JERSEY CITY, N. J.

I. Ordinance

Ordinance No. K-1420, November 17, 1953, amended January 5, 1954.

II. General Statement

An ordinance to regulate and control air pollution by prescribing standards for the emission of smoke, fly ash, noxious acids, soot, cinders, dust, fumes, vapors, mists and gases; providing for inspection of fuel-burning equipment; and establishing penalties for violations.

III. Administrative Organization

Board of Health.

IV. Applicability

A. Sources

Fuel-burning equipment, internal combustion engines, open fires, stacks, chimneys, locomotives and other sources.

B. Specific Pollutants

1. Smoke of a density greater than No. 2 Ringelmann is prohibited, except:

/a/ when emitted from fuel-burning equipment as the result of an unforeseeable breakdown.

/b/ for periods aggregating no more than 3 minutes in any 15 minutes, during the cleaning of a firebox or the building of a new fire, a density not greater than No. 3 Ringelmann is permitted.

/c/ for locomotives, a density not greater than No. 3 Ringelmann for periods aggregating no more than 30 seconds in any 3 consecutive minutes, or periods aggregating no more than 4 minutes in any 15 minutes when building a new fire. /secs. 2, 3/.

2. Emission of smoke, soot, cinders, fly ash, dust, noxious acids, fumes, vapors, mists or gases in such quantity as to cause injury or detriment to inhabitants of the city is prohibited. /sec. 4/.

V. Enforcement

A. Nuisance

Created by emissions prohibited by IV B 1 and IV B 2 above, may be abated by the Board of Health, the Health Officer, or by anyone he may designate for such purpose. /secs. 2, 4/.

B. Unlawful Conduct

To interfere with the enforcement official or the personnel of his department in the performance of duties herein enjoined, or to refuse them entrance to premises at reasonable hours. /sec. 6/.

C. Inspection

Enforcement officials are empowered to inspect all fuel-burning equipment from time to time to determine compliance with the ordinance. /sec. 5/.

D. Penalties

Persons convicted of violating the ordinance shall be subject, on conviction, to a fine of not more than $200, or imprisonment for not more than 90 days, or both. Each day's violation is deemed a separate offense. /sec. 8/.

VI. Preventive Programs

None.

NEWARK, N. J.

I. Ordinance

City of Newark, Ordinance September 17, 1958.

II. General Statement

An ordinance regulating the emission of air pollutants by establishing permissible standards, supervising combustion and other processes and installations, requiring permits and operating certificates, and prescribing penalties for violations. Definition of person includes any department, bureau or agency of the City of Newark and any other public body or agency.

III. Administrative Organization

A. Bureau of Industrial Hygiene and Air Pollution Control in the Division of Inspections of the Department of Health and Welfare. It shall:

1. Issue permits and certificates.
2. Administer laws and ordinances relating to smoke abatement and Air Pollution Control.
3. Receive or initiate and investigate charges and complaints.
4. Inspect all premises which contain equipment which discharges or may discharge air pollutants.
5. Prepare and submit for the Board's approval such rules and regulations as are deemed necessary for the effective enforcement of this Ordinance.
6. Prepare and submit for the Board's approval appropriate revisions to this and related ordinances. /sec. 2.1/.

B. Board of Air Pollution Control, of 7 members, in the Department of Health and Welfare, with jurisdiction to adopt and amend, subject to approval by the Municipal Council, rules and regulations governing emissions, sources, equipment, fees and procedures. /secs. 3.1, 3.2/.

C. Approval Board - the Board of Air Pollution Control with authority to review appeals from any order or decision of the Chief. /secs. 4.1, 4.2/.

IV. Applicability

A. Sources

1. Steam locomotives in yard service and standing or moving in a terminal shall not burn a solid fuel whose volatile content exceeds 20 percent on an ash- and moisture-free basis. /sec. 13.2/.

2. Motor Vehicles - prohibited operations:

/a/ Excessive emissions from stationary vehicles or those moving for a distance of more than 100 yds. within the city. /sec. 14.1/.

/b/ Discharge of polluting gases for more than 3 minutes from bus while stationary at a route terminal. /sec. 14.2/.

/c/ Buses loading and discharging passengers at other than terminals unless within one year after effective date of the Ordinance, equipped with a device to minimize gasoline deposits approved by the Chief. /sec. 14.4/.

/d/ Vertical exhaust pipes, after one year from the effective date of the ordinance, unless horizontal exhaust pipes would endanger the safety of the occupants. /sec. 14.4/.

3. Portable Equipment

/a/ If oil-fired, to be equipped with automatic controls to keep smoke and soot emission within limits otherwise prescribed.

/b/ If solid fuel-burning, such fuel to be anthracite, coke, or a fuel the use of which has be n approved in writing by the Chief. /sec. 15.1/.

4. Incinerators - all flue-fed equipment shall have:

/a/ A primary combustion chamber.

/b/ A secondary combustion chamber.

/c/ An auxiliary heat source adequate to consume completely unburned gases produced in the primary combustion chamber. It shall be in use whenever combustion is to any place, and shall be provided with ignition failure protection controls.

/d/ A settling chamber adequate to reduce the gas velocity enough to permit the settling out of fly ash particles, located on the roof of the building, housing the equipment.

/e/ A means of regulating the draft.

/f/ Fire-proof self-closing doors sealing off all openings and apertures.

Hours of operation are limited to those between 7 A.M. and 5 P.M., after which the fire shall be completely extinguished and the contents of the firebox removed. /secs. 18.1 through 18.6/.

5. All marine installations on piers and waterfront facilities, and all marine craft and floating equipment, shall be subject to the provisions of this ordinance. /sec. 12/.

6. The disposal of refuse in such manner as to cause air pollution, or a salvage operation by open burning, or the open burning of refuse, is prohibited, except that open burning of diseased plant life and trimmings on the premises of origin is permitted if supervised by a competent person, completely extinguished, and done so as not to cause a nuisance. /sec. 16/.

7. Fuel, dirt, sand or other dust-producing substance, or any odor-producing substance, shall not be stored, handled, transported, worked, loaded, unloaded, treated or dealt with in such manner as to cause a nuisance. /sec. 17/.

B. Specific Pollutants

1. Smoke - maximum permitted density of No. 2 Ringelmann except:

/a/ No. 3 Ringelmann for no more than 3 minutes in any consecutive 15 minutes when

1. A firebox is being cleaned.

2. A new fire is built in a cold boiler or furnace.

3. A process has broken down or an operation is being changed.

/b/ No. 3 Ringelmann for smoke from locomotives for no more than 30 seconds in 3 consecutive minutes, or 4 minutes in 15 consecutive minutes when a new fire is being built.

/c/ Smoke from any fire ignited for training or research in fire protection or prevention. /sec. 5.1/.

2. Fly ash

Maximum permissible discharge of pounds of fly ash per hour tabulated with reference to the heat content of fuel-burned, in B.T.U.'s per hour. /sec. 5.2/.

3. Dust

/a/ Dust in gases not to exceed 0.85 lbs. per 1,000 lbs. of gases, adjusted to 50 percent excess air for products of combustion, except:

/1/ Dust emission from metal-melting operations.

/2/ Equipment installed prior to the effective date of the ordinance if its dust collecting efficiency is at least 85 percent.

/3/ During cleaning periods provided the duration and methods employed are approved by the Chief.

/b/ Required dust-collecting devices must be installed within one year after the effective date of the ordinance.

/c/ The Test Code for Dust-Separating Apparatus of the A.S.M.E. shall be the standard for determining the quantity of solids in gases. /sec. 5.3/.

4. Particulate matter other than fly ash and dust shall not exceed a concentration of 0.50 grains/cubic feet of gas at 60 degrees F. and 14.7 lbs./square inch. Required collecting devices must be installed within two years from the effective date of the ordinance. /sec. 5.4/.

V. Enforcement

A. Unlawful Conduct

1. To violate the seal on any equipment duly sealed by the Chief without written authorization from him, the Appeal Board, or a court of competent jurisdiction. /sec. 5.6.3.3/.

2. To interfere with the Chief or his agents in the performance of duty, or to refuse them entrance to premises, at reasonable hours, for the purpose of enforcing this ordinance. /sec. 20.1/.

B. Inspections and Tests

1. Inspection by the Chief and his authorized representatives to investigate complaints or determine violations whenever necessary. /sec. 19/.

2. Tests may be required by Chief:

/a/ As condition precedent to issuance of permit or operating certificate.

/b/ To determine the conformity of fuels to the grade and character called for in specifications or permits.

/c/ To determine the type, quantity and character of emissions from equipment likely to produce air pollutants.

All such tests shall be made at cost of the owner or operator, after 10 days notice and reasonable facilities have been given to the Chief for witnessing such tests. /sec. 11/.

C. Period of Grace

Except as set forth in D below, where there is an emission in violation of this ordinance, the Chief may refrain from taking enforcement measures upon condition that the violator agrees in writing to make adjustments, additions, alterations and do any and all things necessary to comply within the reasonable period of time specified by the Chief in writing. /sec. 5.5/.

D. Sealing of Equipment /secs. 5.6.3/.

1. Following written notice from the Chief of 300 more violations within 12 consecutive months, an offender may be requested to show cause within 10 days of the notice why the offending device should not be sealed.

2. If upon hearing the Chief finds that adequate corrective measures have not been taken, the equipment shall be sealed until the time agreed to in writing by the violator that compliance with the ordinance will have been accomplished. Such agreement must be approved by the Chief.

E. Procedure /secs. 4.4, 4.5, 4.6/.

1. Appeals from an order or decision of the Chief may be filed with the Appeal Board within 10 days after receipt of the decision appealed from.

2. The Board shall set a hearing for not less than 10 nor more than 20 days from the filing of the notice, and give the appellant at least 10 days notice of its time and place.

3. The appellant shall serve a copy of notice of the appeal to the Chief who shall deliver to the Board all data pertinent to the matter under appeal.

4. The Board may affirm, modify or over-rule any decision of the Chief, on whom its decision shall be binding. It shall give written notice of its decision to the appellant within 20 days thereof, unless a longer time is required.

5. Technical rules of evidence prevailing in the courts of the state may be relaxed but not abrogated in proceedings conducted by the Board.

F. Penalties

A fine of up to $500, or imprisonment for up to 90 days, or both, may be imposed for each offense, and each day of violation of any provision of the ordinance shall constitute a separate offense.

VI. Preventive Programs

A. Registration /secs. 5.6.1, 5.6.2/.

1. Information relating to place, type, quantity, and heat content of the fuel burned, description of equipment, period of operation, height and size of outlet, and description of dust-removal equipment shall be filed with the Bureau for each stack emitting the products of solid fuel combustion.

2. Such information shall be filed within 90 days from the effective date of this ordinance for existing installations, and within 90 days from the beginning of operation of new or altered installations.

3. Similar registration may be required of other points of discharge by other equipment when deemed necessary by the Chief.

4. Solid fuels with a heat content of less than 1 million B.T.U.'s per hour, marine installations, vehicles, portable equipment, drainage system vents, ventilating exhaust fans, and other equipment which, in the Chief's determination, does not emit harmful pollutants, are exempted from this requirement.

B. Permits

1. A permit issued by the Chief shall be required for the construction, installation, or alteration of equipment likely to cause air pollution or intended to reduce or eliminate it, except:

/a/ Internal combustion engines, locomotives, motor vehicles and portable equipment.

/b/ Repairs to previously approved equipment.

/c/ Minor alterations of such equipment. /sec. 6/.

2. Variations from the permits shall be permissible only after amended applications have been expressly approved in writing by the Chief. /sec. 6/.

3. Installation permits are requested for each unit of the equipment being installed. /sec. 6/.

4. Any violation of these provisions shall be sufficient cause for the Chief to stop all work and seal the installation, such work to be resumed only on the written approval of the Chief after full compliance with the ordinance. /sec. 6/.

5. The permit shall be cancelled automatically if work is not begun within one year after its issuance, or is suspended for more than one year. /sec. 6/.

6. Each day of work in violation of the provisions herein shall constitute a separate offense. /sec. 6/.

7. Applications. /secs. 7, 8, 9/.

/a/ To be made in writing to the Chief on prescribed forms.

/b/ To contain a description of the equipment and work to be done, a description of the structure housing such equipment, and any other information required by the Chief.

/c/ To be accompanied by detailed plans and specifications, including a statement of the calculated heating, power, process or other loads on and the capacity of the heating or fuel-burning equipment and the type and quality of fuel to be used.

/d/ To be acted upon within 5 days of filing unless a longer time is required. Action delayed for more than

30 days may be appealed to the Board. If disapproved, notice thereof and reasons therefor shall be sent to the applicant who may request a hearing to appeal the decision to the Board.

C. Operating Certificates /sec. 10/.

1. Certificates from the Chief shall be required for the operation of all new or altered equipment, except:

/a/ Internal combustion engines, locomotives and motor vehicles.

/b/ Repairs to previously approved equipment.

/c/ Minor alterations of such equipment.

2. Certificates shall be issued for all work done under an installation permit after inspection and approved by the Chief, and shall be displayed in the immediate vicinity of the equipment.

3. Absence of the required certificate is grounds for sealing it, and each day of operation without the certificate is a separate offense.

NEW BRUNSWICK, N. J.

I. Ordinance

Air Pollution and Smoke Abatement Ordinance, eff. November, 1952. Public Health Nuisance Code.

II. General Statement

Ordinance regulates emission of dense smoke and prohibits the escape of soot, cinders, noxious acids, fumes and gases. It provides for enforcement by the Board of Health and imposes penalties for violation. The Public Health Nuisance Code prohibits the escape of air contaminants into open air, makes such escape a nuisance and makes the maintenance of a nuisance unlawful.

III. Administrative Organization

A. Board of Health which has the power:

1. Summarily to abate the emission of dense smoke and the escape of soot, cinders, noxious acids, fumes and gases. /Ordinance secs. 2, 4/.
2. To test for volatile content of smokeless fuel. /Ordinance sec. 6/.
3. To investigate complaints of violations.
4. To investigate and make recommendations for revision of this or any other ordinance pertaining to smoke control and air pollution.
5. To inspect fuel-consuming devices to determine whether Ordinance is being complied with.
6. To prepare and disseminate appropriate educational and informative material to the public for the purpose of advising them of the purposes and necessity of the smoke prevention campaign.
7. To cooperate with all civic or other groups interested in smoke prevention.
8. To do any and all other acts which may be necessary for the succesful prosecution of the purposes of Ordinance. /Ordinance sec. 7/.

IV. Applicability

A. Sources /See IV B/.

B. Specific Pollutants

1. Smoke

Emission of smoke from any source of a density equal to or greater than No. 2 Ringelmann unlawful. /Ordinance sec. 2/.

Exceptions:

/a/ Private residences in which no more than two families are or can be housed. To all larger dwellings of whatever type Ordinance is applicable.

/b/ When firebox, furnace, boiler, locomotive, or other fuel-consuming device is being cleaned out and a new fire is being built therein, in which event smoke of a density greater than No. 2 Ringelmann permitted for period not to exceed 6 minutes in any single period of 60 minutes. /Ordinance sec. 3/.

2. Soot, cinders, noxious acids, fumes and gases

/a/ Escape of such quantities of soot, cinders, noxious acids, fumes and gases in such place and manner as to be detrimental to any person or to the public or to endanger the health, comfort and safety of any such person, or of the public, or in such manner as to cause or have a tendency to cause injury or damage to property or business, prohibited. /Ordinance sec. 4/.

/b/ Escape into open air from any stack, vent, chimney or any entrance to the open air, or from any fire into the open air of such quantities of smoke, fly ash, dust, fumes, vapors, mists or gases as to cause injury, detriment or annoyance to the inhabitants or endanger their comfort, repose, health or safety, prohibited. /Code sec. 2.1 /d/ /.

3. Negligent Emissions

Negligently allowing the escape of dense smoke, defined as smoke having a density of No. 2 Ringelmann or greater, or negligently allowing escape of such quantities of soot, cinders, noxious acids, fumes and gases in such manner as to be detrimental to any person or to the public or to endanger the health, comfort, or safety of any such person or of the public or in such manner as to cause or have a tendency to cause injury or damage to property or business, unlawful. /Ordinance sec. 5/.

4. Volatility

Use or consumption in any solid fuel-burning equipment any solid fuel which does not meet the standards of smokeless solid fuel set forth as fuel, the volatile content of which is 20 percent or less on a dry basis; provided, however, that if a fuel contains volatile matter in excess of 20 percent on a dry basis, it shall be acceptable under Ordinance if it meets the same standards in regard to smoke production as that of a fuel containing less than 20 percent volatile matter on a dry basis and subject to the following conditions in order to ascertain whether or not such standards are met:

/a/ Complete plans and specifications for the use of such fuel are submitted to the Board, together with any additional material it may reasonably require;

/b/ An adequate supply of the finished product must be made available to the Board to conduct whatever tests it deems necessary to establish its value as a smokeless solid fuel;

/c/ Payment in advance all expenses of such tests;

/d/ Board is authorized to publish a list of brands or trade names of smokeless solid fuels and to compile and publish from time to time statistics in reference to the supply, prevailing prices and other pertinent facts for the guidance of the public;

/e/ Provided, however, that solid fuel having a volatile content in excess of 20 percent on a dry basis but not meeting the conditions enumerated above can be used or consumed upon the issuance of a permit of approval by the Board only in heating devices equipped with appliances which are so constructed as to insure the complete combustion of all fuel used and further designed to prevent any and all air pollution prohibited by the ordinances, which devices have been previously approved by the Board. /Ordinance sec. 6/.

V. Enforcement

A. Nuisance

Emission of dense smoke and allowing soot, cinders, noxious acids, fumes and gases declared to be a nuisance and may be summarily abated by the Board. /Ordinance secs. 2, 4/.

B. Unlawful Acts

1. Interfering or impeding the performance of the duty of the Board is a violation of Ordinance and subject to the penalties provided. /Ordinance sec. 8/.
2. Maintenance of public health nuisance. /Code sec. 2.2/.

C. Period of Grace

When adequately demonstrated to Board that compliance with Ordinance cannot be effectively and immediately made, Board has authority to grant temporary permit for the continued operation of non-complying equipment, but only in the event that the party has taken all necessary steps to secure compliance with the Ordinance. Temporary permit shall be issued for no longer a period than 6 months, at the expiration of which party holding permit shall be deemed in violation of Ordinance. /Ordinance sec. 9/.

D. Penalties

Violation of Ordinance other than section dealing with negligence leads to penalty of not less than $10 nor more than $100. Violation of section dealing with negligence leads to fine of not less than $75 nor more than $100. Offenses on separate days are separate offenses. Persons in violation of Ordinance are severally liable. Abatement provided for is in addition to any penalties prescribed. /Ordinance sec. 11/.

VI. Preventive Programs

None.

TRENTON, N. J.

I. Ordinance

Ordinance No. 1104, November 12, 1959, amended December 10, 1959.

II. General Statement

An ordinance to control air pollution defined as "the presence of substances in the atmosphere in quantities which are injurious to human, plant or animal life, or to property, or unreasonably interfere with the comfortable enjoyment of life and property," by setting a standard of permissible smoke emission, prohibiting open burning, prohibiting pollution from radioactive materials, packing yards, contaminated water, internal combustion engines, and other sources, and imposing penalties for its violation.

III. Administrative Organization

The Health Officer of the City of Trenton, whose general powers are: /sec. 9/.

1. to investigate complaints
2. observe smoke and other polluting conditions
3. inspect installations
4. conduct hearings
5. grant temporary exemptions for non-complying equipment.

IV. Applicability

A. Sources:

1. Open burning of refuse is prohibited as is its use in conducting salvage operations and heating tar and asphalt kettles. /sec. 2/.
2. Packing yards and internal combustion engines are prohibited from causing air pollution nuisance, defined as "the presence in the atmosphere of smoke, fumes, dust, soot, fly ash, cinders, noxious acids, oxides, alkalies, volatile matter, vapor, gas, mist, radioactive material, odor, lint, or any combination thereof, of a character and in a quantity which as to any group of persons interferes with their health,

repose or safety, or causes severe annoyance or discomfort, or tends to lessen normal food and water intake, or produces irritation of the upper respiratory tract, or produces symptoms of nausea, or is offensive or objectionable, or both, to normal persons because of inherent chemical and physical properties, or causes or is likely to cause injury or damage to real or personal property of any kind, or which interferes with normal conduct of business, or is detrimental or harmful to the health, comfort, living conditions, welfare and safety of the inhabitants of the city." /secs. 6, 8/.

3. Contaminated water: it is not permitted to dump any materials into City waters, or to emit materials thereinto from any article, machine, equipment, marine installation, contrivance or their discharge or exhaust systems, so as to cause contaminated water. /sec. 7/.

B. Specific Pollutants:

1. Smoke from any fuel-burning equipment of a greater density than No. 2 Ringelmann is prohibited, except:

/a/ A density not greater than No. 3 Ringelmann is permitted for a period aggregating no more than 3 minutes in any 15 consecutive minutes during the cleaning of a fire box or the building of a new fire.

/b/ A density equal to but not greater than No. 3 Ringelmann, from locomotives, for periods aggregating no more than 30 seconds in any 3 consecutive minutes, or, when building a fire, for no more than 4 minutes in any 15 consecutive minutes.

/c/ Smoke resulting from any fire ignited for the purpose of training or research in fire protection or prevention. /sec. 3/.

2. Smoke, fumes, dust, soot, fly ash, cinders, noxious acids, oxides, alkalies, volatile matter, vapor, mist, gas, odor or lint shall not be emitted in such quantity as to cause Air Pollution or an Air Pollution Nuisance from sources including, but not limited to, refuse disposal, process furnace operations, paint, varnish or laquer spraying and painting operations, rendering plant operations, sand blasting, or chemical processing, and the storing, handling or transportation of dust-producing substances and dust-size materials. /sec. 4/.

3. Radioactive material may not be emitted in violation of the rules and regulations of the U.S.A. and the N.J. Department of Health. /sec. 5/.

V. Enforcement

A. Procedure

On failure to correct or remedy a violation, the offending party shall be notified to answer the complaint at a hearing before the Health Officer, who shall have authority to permit continued operation of the non-complying equipment for not more than 6 months on condition that necessary steps will be taken to secure compliance. Such period may be extended, for good cause shown, for an additional period of not more than 6 months.

B. Penalties

Any person convicted of violating this ordinance shall be subject to a fine of not more than $100, or imprisonment for not more than 30 days, or both, and each day's violation is deemed a separate offense.

UNION CITY, N. J.

I. Ordinance

Union City Ordinance, February 10, 1927.

II. General Statement

An ordinance prohibiting the emission of dense smoke from and the use of bituminous coal in certain fuel-burning equipment and imposing penalties for violations thereof.

III. Administrative Organization

Commissioner of Police /sec. 3/.

IV. Applicability

A. Sources

Steam rollers, steam derricks, steam pile drivers, tar kettles, or other similar machine or contrivance, unless the specified equipment above mentioned is equipped with steam arrestors, which shall limit the density of the smoke. /sec. 1/.

B. Specific Pollutants

Smoke of a greater density than No. 3 Ringelmann prohibited /sec. 2/, except for a period or periods aggregating not exceeding six /6/ minutes in any one hour. /sec. 3/.

C. Volatility

The use of bituminous /soft/ coal is absolutely prohibited unless the equipment is fitted with steam arrestors /sec. 2/.

V. Enforcement

A. Nuisance

All violations of the standard set out in IV B above are nuisances which shall be summarily abated by the Commissioner of Police.

B. Penalties

Any person violating this Ordinance may be imprisoned for not longer than ninety /90/ days and may be fined not more than $200, or both, and in default of payment of any fine thus imposed, any person convicted of any provision of this Ordinance may be imprisoned for a term not exceeding ninety /90/ days. /sec. 4/.

VI. Preventive Programs

None.

BINGHAMPTON, N. Y.

I. Ordinance

Ordinance No. 186; /September 21, 1948/.

II. General Statement

The ordinance prohibits certain emissions, provides for its enforcement and for penalties for violations.

III. Administrative Organization

A. Smoke Control Director has the duty to make inspections and to enforce the Ordinance.

B. Commissioner of Public Safety has the duty to abate and prosecute violations.

IV. Applicability

A. Sources /see IV B/.

B. Specific Pollutants

1. No person shall cause or allow to be emitted from any fuel-burning equipment, except locomotive internal combustion engine, premises or open fire smoke of a density equal to or greater than No. 2 Ringelmann for more than three minutes in any 15 minutes or smoke of a density greater than No. 2 Ringelmann for longer than one minute in any 30 minutes, except that when building a new fire, cleaning a fire, or a breakdown of equipment occurs, smoke of a density greater than No. 2 Ringlemann may be emitted for not exceeding two minutes in any 15 minutes or smoke equal to No. 2 Ringelmann not more than three minutes in any 15 minutes.

2. No person shall cause to be emitted from any locomotive, smoke the density of which is, equal to or greater than No. 2 Ringelmann for more than three minutes in any 15 minutes or smoke of a density greater than No. 2 Ringelmann for longer than one minute in 30 minutes, except when a new fire is being built, a fire is being cleaned or a breakdown of equipment occurs, for the first half-hour smoke of a greater density than No. 2 Ringelmann may not be emitted for more than three minutes in any 15 minutes and not more than two continuous minutes, and for the second half-hour,

smoke greater than No. 2 Ringelmann may be emitted not more than two minutes in an 15 minutes and smoke equal to No. 2 Ringelmann not more than three minutes in any 15 minutes.

V. Enforcement

A. No person shall in any way hinder or interfere with the Smoke Control Director in the performance of his duties or refuse him or inspectors with proper identification, entrance to premises at reasonable hours.

B. The Commissioner of Public Safety is authorized on ten days' notice to conduct hearings to show cause why a violation should not be abated and make such order as may be necessary. If the order is not obeyed within ten days, the Commissioner shall institute proceedings for abatement and punishment.

C. Penalties - Any person convicted of violating this ordinance shall be liable for a fine of not more than $100 or imprisonment for not more than 30 days or both.

CHEEKTOWAGA, N. Y.

I. Ordinance

Air Pollution Ordinance /Local Ordinance No. 26/ July 7, 1958.

II. General Statement

Ordinance prohibits certain emissions of smoke and particulate matter, creates the Division of Air Pollution Control, provides for permits and operating certificates for certain equipment and for fees, and provides for penalties for violations and procedure whereby an aggrieved party can get review of an adverse decision or act. The definition of person includes any department, bureau or agency of the town, and any other public body or agency.

III. Administrative Organization

Division of Air Pollution Control headed by the Town Health Officer and the Board of Air Pollution Control in the Health Department. The Board has the power to adopt rules and regulations, make investigations, and conduct hearings.

IV. Applicability

A. Sources

1. The Health Officer may approve or reject for reasonable cause any type of fuel-burning or refuse-burning device, except as otherwise approved pursuant to governing law. /sec. 15.1/.

2. Burning of garbage, refuse, or other combustible material in open fire is prohibited within the town, except under restrictions prescribed by the Department of Health and Fire Department. /sec. 16.1/.

3. Incinerators shall be:

/a/ Of adequate size to permit combustion of volatile matter distilled from the material on the grates during the period of maximum feeding. /sec. 17.3/.

/b/ So designed that there is no free flow of smoke, odors, fumes, or fly ash to the open air. /sec. 17.4/.

B. Specific Pollutants

1. Smoke of a density equal to or greater than No. 2 Ringelmann shall not be emitted for more than

three minutes in any one hour, except that when a fuel consuming device is being cleaned out or a new fire is being built in a cold boiler or furnace, smoke greater than No. 2 Ringelmann may be emitted for a period not to exceed 6 continuous minutes in any 60 minutes. /sec. 8.1/.

2. No person shall cause or allow to be emitted from any source, any air contaminant which may be a detriment to property or a nuisance to persons not therein engaged. Such a condition shall be deemed a nuisance when the Health Officer so declares and may be summarily abated by him. /sec. 8.3.1/.

C. Volatility Standard

1. Dust emissions from the stack, or past a convenient measuring point adjacent to the stack, of any boiler plant may not exceed the concentrations set forth in this table:

Steam generated lbs. per hour	Lbs. dust per 1,000 lbs. of steam
100,000 or less	2.2
150,000	1.9
200,000	1.7
300,000	1.4
400,000	1.2
500,000	1.1
600,000	1.0
800,000	0.9
1,000,000 or more	0.8

Note - For values of steam generated between those tabulated, the corresponding values of pounds dust per 1,000 pounds steam may be found by linear interpolation.

Exception - The emission concentrations of the chart may be exceeded during cleaning periods, provided the means and the time are approved by the Health Officer. /sec. 8.2.1/.

2. Emissions from fuel or refuse burning equipment not used for steam generation shall not contain dust in the gases to exceed 0.85 pounds per 1000 pounds of gases, of which amount not to exceed 0.40 pounds per thousand pounds of gases shall be of such size as to be retained on the

325 mesh U.S. Standard Sieve, adjusted to 50 percent excess air for products of combustion. /sec. 8.2.2/.

3. Except as provided above, emissions from any source shall not contain particulate matter in excess of 0.85 pounds per 1000 pounds of gases, adjusted to 50 percent excess air for products of combustion. /sec. 8.3.2/.

4. The amount of solids in the gases shall be determined according to the Test Code of the A.S.M.E.

V. Enforcement

A. Registration

The Health Officer may require the registration of points of emission which shall include the location, size and height of outlets and composition and temperature of the emission and such data as the Health Officer may request. The Health Officer shall allow 60 days for registration, except that in case of emergency a lesser time may be designated. /secs. 8.4.2.1 and 8.4.2.2/.

B. Sealing

After three prior notices of violations of this Ordinance, with respect to emissions, within 12 months, the one who owns or controls the premises or equipment causing the violations may be required to show cause, within not less than ten days, why the equipment should not be sealed. If, upon such hearing, the Health Officer finds that adequate corrective means have not been used to correct the condition, the Health Officer shall order the equipment to be sealed until the responsible person submits a statement of the intended changes and the date of compliance which meets the approval of the Health Officer. /sec. 8.5.1/.

C. Refusal to Comply

Any person who shall refuse to comply or assist in the violation of this ordinance or who interferes or attempts to interfere with the enforcement of this ordinance or who refuses to permit entrance at a reasonable hour to the Health Officer or other authorized personnel to premises where these Rules and Regulations have been or are being violated or refuses to permit an inspection of such premises for the purpose of enforcing these Rules and Regulations shall be subject to the penalties herein provided. /sec. 19.1/.

D. Variances

1. If the Board, upon a hearing after ten days' notice thereof, finds that compliance with these or any other rules and regulations or orders will result in an unreasonable taking of property or in the practical closing and elimination of any lawful business, occupation or activity without a corresponding benefit to the people, it shall prescribe different requirements. However, no variance may permit or authorize the maintenance of a nuisance. /secs. 24.1 through 24.4/.

2. The Board, upon a public hearing after ten days' notice to all interested parties, may revoke or modify any order granting a variance. /sec. 24.6/.

3. The Board may specify the time period in which a variance shall be effective, in no case shall exceed one year, but such variance may be continued from year to year without another hearing on approval of the Health Officer.

4. When the Health Officer finds an emission is in violation of these Rules and Regulations, he may refrain from legal action upon receipt, from the owner or operator, of a stipulation that immediate adjustments will be made which, in the opinion of the Health Officer, will abate the violation in satisfactory time. /sec. 8.4.1/.

E. Analysis

The Health Officer may, at his discretion, require the owner or operator of any equipment or device to submit an analysis of the discharge from the exhaust or vent, or may require fuel samples to be taken of any fuel used in such equipment. /secs. 14.2 and 14.3/.

F. Procedure

Any person who is a party of record at a hearing provided for by these rules and regulations may maintain a special proceeding in the Supreme Court to question any action of the Board. Such proceeding shall be a trial de novo of all issues. /secs. 25.1 and 25.2/.

G. Penalties

Any person convicted of violating any of these provisions, any rule of the Board of Air Pollution Control or any order made or decision rendered by the Board or the

Health Officer is subject to a fine of $25 to $100 or by imprisonment for not more than three months or both for the first offense, and by a fine of $50 to $500 or by imprisonment for not more than six months or both for subsequent offenses.

VI. Preventive Programs

A. Permits

No person shall construct, reconstruct, install or alter any equipment capable of emitting air pollutants, including incinerators used for the disposal of industrial or commercial waste and crematories, until an application including plans and specifications has been filed with the Health Department and a permit has been issued by the Health Officer.

The Health Officer, in his discretion, may grant permission to proceed with construction, installation or alteration in cases where a permit is required before final approval of the application for a permit, when the applicant has filed with the Health Officer his personal bond with at least two sureties, approved by the Health Officer, or a corporate surety bond of $2500.00 conditioned for the payment of any loss, damage or injury to property or persons from violation of any local or state laws with respect to installation of fuel and refuse burning equipment. If work is not begun within one year of issuance, the permit shall be automatically cancelled.

Upon disapproval of an application, the applicant shall be notified of the reasons for disapproval. If the disapproval is unanswered for 60 days, the application is cancelled. The application may be reinstated upon written request. If an application is not acted upon within 30 days, the applicant may appeal to the Health Officer. /secs. 9.1, 17.1, 17.2, 9.1.6, 9.2, 12.1, 12.1.1, 12.2/.

B. Operating Certificates

No person shall use or cause to be used any new or remodeled or reconstructed equipment capable of emitting air pollutants or equipment intended to control such emissions unless he shall have an operating certificate from the Health Department. The Health Officer may require a test to be made of such new or altered equipment as a condition of approval. /secs. 13.1 and 14.1/.

C. Exceptions

The following equipment is not subject to the requirements for permits or operating certificates:

1. Fuel-burning equipment and space heaters in one or two family dwellings and other installations below 150,000 BTU per hour input. /secs. 9.1.1 and 13.1.1/.

2. Fuel-burning equipment wherein the maximum fuel input per hour is between 150,000 and 300,000 BTU, except that the owner furnishes complete data as to size, make and model of equipment to be installed. /secs. 9.1.2 and 13.1.3/.

3. Internal combustion engines and locomotives. /secs. 9.1.3 and 13.1.3/.

4. Repairs to previously approved equipment. /secs. 9.1.4 and 13.1.4/.

5. Minor alterations. /secs. 9.1.5 and 13.1.5/.

D. Fees

Fees are charged for installation permits but not for operating certificates.

JAMESTOWN, N. Y.

I. Ordinance

October 1, 1941, amended to November 30, 1953.

II. General Statement

An ordinance to regulate the emission of smoke and other materials by establishing a standard of permissible smoke emission, requiring construction permits, and imposing penalties.

III. Administrative Organization

A. Smoke Abatement Commission of 5 members appointed by the Mayor with power to hear grievances, review decisions, and grant variances. /sec. 3/.

B. Building Inspector is charged with enforcing the ordinance. /sec. 8/.

IV. Applicability

A. Sources: smoke stack, chimney, open fire. /sec. 7/.

B. Specific Pollutants: /sec. 7/.

1. Smoke, except for a period aggregating nine minutes or less of a density of No. 2 Ringelmann or for a period not exceeding six minutes in any one hour of a density in excess of No. 2, during which time the firebox is cleaned out or a new fire is being built therein, is prohibited and declared a nuisance.

2. Smoke, ash, dust, soot, cinders, acid, or other fumes, dirt, or other material or noxious gases from any smokestack, chimney or open fire in such quantity as to cause injury, detriment or nuisance to persons, or to endanger their health or safety, or to cause injury or damage to business or property is declared to be a public nuisance and is prohibited.

V. Enforcement

A. Variances

The Commission shall have the power to relieve an applicant or appellant from the strict enforcement of this ordinance when satisfied that undue hardship or damage would result therefrom, but shall have no power to permit a departure from the ordinance for the new installation or repair of heating apparatus or equipment in existence at the time of its passage. /sec. 3/.

B. Penalties

Every person convicted of violating this ordinance shall be subject to a fine of not less than ten nor more than one hundred dollars, and on default of its payment may be imprisoned for not more than 30 days. Every day of continuing nuisance is deemed a separate offense. /sec.10/.

C. Procedure

Any person aggrieved by the enforcement of this ordinance may file written request for a hearing, stating the grievance and the grounds for his request. The Commission shall notify him of the time and place of its next meeting and give him opportunity to present testimony. /sec. 6/.

VI. Preventive Programs

A. Permits /sec. 9/ to be issued by Building Inspector.

1. Required for the construction, alteration or repair of any steam stationary plant, boiler or furnace within the factory and mercantile zones of the city.

2. Applications shall show the style and dimensions, with the height and size of any stack or chimney, and the method or device to be used for preventing smoke emission.

VII. Miscellaneous

"All accidents to stationary steam boilers, furnaces and smoke-preventing devices shall be reported to the Building Inspector in writing, giving the nature of the incident and the time required to repair the same." /sec. 11/.

MOUNT VERNON, N. Y.

I. Ordinance

General Ordinances of Mount Vernon, Chapter 96, November 15, 1957; Mount Vernon Sanitary Code, Article XI, Section 1.

II. General Statement

Ordinance controls atmospheric pollution from buildings using fuel oil-burning equipment; provides for the abatement of nuisances and sealing of equipment and requires the making of tests at the discretion of the Fire Commissioner. Sanitary Code prohibits atmospheric pollution.

III. Administrative Organization

A. Commissioner of Health who has power summarily to abate nuisances under the Code.

B. Fire Commissioner who has power summarily to abate nuisances, order the sealing of equipment and require tests of fuel oil-burning equipment, under the Ordinance.

IV. Applicability

A. Sources /See IV, B./.

B. Specific Pollutants

1. Smoke

Emission from any building using fuel oil-burning equipment of smoke the shade or appearnace of which is equal to or darker than No. 2 Microringelmann, except:

/a/ Smoke the shade or appearnce of which is equal to but not darker than No. 3 Microringelmann for more than 4 continuous minutes when building a new fire or when breakdown of equipment occurs such as to make it evident that the emission was not reasonably preventable, or

/b/ Smoke, the shade or appearance of which is equal to but not darker than No. 2 Microringelmann for a period or periods aggregating 2 minutes in any hour. /Ordinance sec. 96-3/.

Production, emission or escape of smoke of a degree in darkness equal to or greater than No. 2 Ringelmann, regardless of how produced or discharged, except for a period or periods aggregating six minutes in any one hour is declared to be a nuisance. /Code sec. 1 b/.

2. No person shall operate or maintain any building, equipment, vessel, stationary or locomotive engine, device, container pipeline, vehicle, place or premises, so as to cause smoke, cinders, gas, vapors, dust, fumes, offensive or noxious odors, substances or liquids to escape or be discharged in such quantities sufficient to endanger the public health. /Code sec. 1 a/.

3. Dust

Discharge or escape of such quantities of soot, cinders, fly-ash, noxious acids, fumes, vapors or gases in such place or manner as to cause injury, detriment, nuisance or annoyance to a considerable number of persons or so as to endanger the comfort and repose, health or safety of a considerable number of persons; or in such manner as to cause or have a tendency to cause injury or damage to business or property, may be considered by the Commissioner as presumtive evidence that such discharge pollutes the atmosphere in violation of the section. /Code sec. 1 c/.

V. Enforcement

A. Abatement

When Fire Commissioner shall declare a nuisance to exist, it may be summarily ordered to be abated. /Ordinance sec. 96-3 /b/ /.

Commissioner of Health may summarily abate public health nuisances found under Code. /Code sec. 1 b/.

B. Sealing

After previous notification of violation of Ordinance in respect to the emission of dense smoke, soot, cinders or noxious gases caused by fuel oil-burning equipment, owner, agent, occupant, manager or lessee in charge of premises shall be notified to show cause before the Fire Commissioner, why the equipment causing such violation should not be sealed. /Ordinance sec. 96-4/.

C. Unlawful Acts

1. Breaking seal of fuel oil-burning equipment, unless permitted in writing. /Ordinance sec. 96-4/.

2. Preventing access to premises by the Fire Commissioner or his delegates. /Ordinance sec. 96-5/.

D. Testing

Fire Commissioner, at his discretion, may require owner or operator of any fuel oil-burning equipment to submit to him a test performed at the expense of the owner or operator, of the equipment, by a licensed professional engineer, qualified chemist or chemical engineer. He may require the submission of an analysis of the quantity and character of the matter discharged from a stack, duct, vent, or other exhaust conduit or system, at the expense of the owner or occupier, by a qualified chemist or chemical engineer. He may require the submission of an analysis of the fuel used in the fuel oil-burning equipment at the expense of the owner or operator, by a qualified chemist. /Ordinance sec. 96-6/.

E. Penalties

None.

VI. Preventive Programs

None.

NEW YORK, N. Y.

I. Ordinance, Regulations

New York City Charter, New York City Administrative Code, Chapter 47, as amended; Rules and Regulations of Department of Air Pollution Control, effective, May 15, 1954, as amended.

II. General Statement

Ordinance and Rules and Regulations control the emission of air contaminants and the construction, reconstruction, alteration, conversion and repair of all equipment capable of producing air contaminants. Permits and certificates are required to be obtained, fees are charged and penalties imposed. Definition of person includes any department, bureau or agency in City of New York, and any other public body or agency.

III. Administrative Organization

A. Department of Air Pollution Control

B. Commissioner of Air Pollution Control, is administrative head of the Department. His powers include:

1. Regulation and control of emissions of air contaminants.
2. Enforcement of all laws and regulations with respect to such emissions.
3. Investigation for purpose of controlling and eliminating air pollution, and for such purpose he shall have power to compel attendance of witnesses and take testimony under oath.
4. Recommendation to Board of Air Pollution Control the adoption of such rules and amendments as may be necessary or proper for the elimination or control of air pollution. /Code sec. 1072/.
5. Issuance of permits and certificates.

C. Board of Air Pollution Control, composed of 5 members, powers include:

1. Adoption and amendment of rules regulating or prohibiting emission from any source, whether fixed or movable, and whether on land or water; any harmful or objectionable substances, and, with respect to the installation, construction or alteration of equipment giving forth such emissions into the open air.

2. Compelling attendance of witnesses, and taking of testimony under oath.

3. Fixing of fees for filing documents, issuance of permits and examination of plans. /Code secs. 1073, 1075/.

IV. Applicability

A. Sources

1. Marine Installations /Rule 8/.

Installations on piers or water front facilities subject to rules applicable to stationary plants. When marine craft or floating equipment moored at any pier or while such craft are operating in water in jurisdiction of Board, notice of emission prohibited must be posted in engine room and in each boiler room. All marine craft and floating equipment having hand-fired boilers shall use solid fuel the volatile content of which does not exceed limit specified in Rule 14.3 /post/. All marine craft and floating equipment under jurisdiction of City of New York and those moored in City of New York are subject to these regulations.

2. Railroad and Automotive Equipment /Rule 9/.

/a/ Portable equipment, such as cranes, hoists and shovels, subject to Rule 10. Roundhouses, shops and terminals subject to rules applicable to stationary plants. Stacks on round houses subject to same rules as those for stacks on stationary plants. All steam locomotives in yard service and all steam locomotives standing or moving in the terminal, which burn solid fuel, shall use a solid fuel the volatile content of which does not exceed Rule 14.3. Permits and operating certificates are required for locomotives used as stationary boilers for the production of heat and power.

/b/ Motor vehicle cannot be operated which emits visible smoke or visible fumes while stationary or while moving for distance of more than 100 yards upon city streets, roads or highways. Bus drivers cannot permit gasoline or diesel engine to operate so as to discharge air polluting gases for more than 3 minutes while the bus is stationary at a route terminal. Gasoline-fueled bus, picking up or discharging passengers at other than terminals, cannot be operated, unless it is equipped with a device to minimize the deposit of gasoline in the intake passages and manifold of the engines while decelerating. Such devices to be approved by the Commissioner.

3. Portable Equipment /Rule 10/.

Operating certificate required for portable equipment. but not permit. Completed application to be filed with Department. Certificate revocable for non-compliance with regulations.

Operating certificate for portable construction equipment shall be issued and remain in force only when:

/a/ The equipment, if oil-fired, is provided with such automatic controls as will reasonably assure that smoke and soot will not be emitted in violation of the emission prohibitions.

/b/ If solid fuel is burned in any equipment, such fuel shall consist of anthracite or coke.

4. Equipment /Rule 11/.

Commissioner reserves right to approve or reject for reasonable cause any type of fuel or refuse-burning equipment or device, except as otherwise approved pursuant to governing law.

/a/ Stationary fuel-burning equipment using residual oils or bituminous coal as fuels.

/1/ Smoke detection and control device acceptable to the department shall be provided for fuel-burning equipment, hereafter installed, using residual oil or bituminous coal as fuel and combustion equipment heretofore installed found to be in violation of the emission prohibitions. The smoke detection and control device must be maintained in good operating order and must be in operation whenever the equipment being monitored is in service.

/2/ Device shall be preset to detect presence of smoke and be capable of causing audible and visible signals when detecting smoke equivalent to or greater than No. 2 Ringelmann. The device shall be equipped, installed and operated so as to automatically halt the combustion processes being monitored after the production of such smoke for a period in excess of 2 minutes. This portion of the device known as the automatic shut off; it shall halt the operation of fuel-burning equipment until the equipment is adjusted to abate illegal emissions. The device shall be so wired to the fuel-burning equipment as to prevent it from being turned off when equipment is operating except by breaking of a seal. Device, if of the photo-electric cell type, shall also cause a signal to operate whenever light source fails or becomes insufficient.

/3/ Signals produced by the device to indicate the production of smoke shall be audible signals and the illumination of a red light of sufficient intensity and so located as to be capable of attracting attention of person in charge of equipment being monitored. Signal to be installed so as to operate during the entire period that smoke equivalent to or greater than No. 2 Ringelmann is produced and to continue after the combustion process may have been shut off and until the device is manually reset and the combustion process restored to proper operation.

/4/ If two or more combustion units are connected to a common breeching and stack, one device shall be designed and installed so as to monitor the smoke of all combustion units and to halt simultaneously the operation of all units so monitored; multiple installations may have devices installed on each combustion unit.

/5/ Automatic shut off may be replaced by a fully automatic combustion control system designed and installed to maintain fuel air ration for proper combustion.

/6/ Where smoke produced by an automatic combustion process cannot be automatically and promptly halted by the stopping of fuel-feeding mechanism, a smoke recorder may be substituted for the automatic shut off. Recorder to produce, on 24-hour basis, a record of the time and duration of smoke equivalent to or greater than No. 2 Ringelmann. Records to be dated and retained on premises subject to examination by the Department for a period of at least 60 days.

/7/ Exception: These rules do not apply to high pressure boilers under continuous control and supervision of a licensed stationary engineer.

/b/ Any residual oil-burning equipment hereafter installed shall have not less than 2 oil heaters each capable of heating oil to a temperature appropriate for the oil and burner. Where only one of the heaters is intended for continuous operation it shall be capable of heating not less than the oil-burning pumping capacity or twice its burning capacity, whichever is greater. At least one heater shall have as its source of heat, independent of the boiler or furnace, and shall have a capacity at least one quarter of the burning capacity.

/1/ Submerged heaters shall be equipped with valved blowdown outlet and shall have shut off valve located in lower boiler connection between the blowdown outlet and boiler.

/2/ Installations using residual oils shall be equipped with thermometer showing temperature of fuel oil after it has passed through heaters. Must be installed so as to be observable.

/3/ All automatic burners hereafter installed using residual oils shall be equipped with device preventing oil from being delivered by the burner to the furnace until proper temperature for proper atomization is present.

/4/ All installations burning residual oil shall be provided with poster giving installation data and instructions for maintenance and operation procedures to prevent stack emissions in violation of regulations.

/c/ Smoke Ovens

All smoke ovens shall be so constructed or reconstructed with auxiliary fire or other suitable apparatus so that the emission prohibitions are not violated.

/d/ Miscellaneous Equipment

The type of fuels that shall be used in all asphalt kettles, bake ovens, coffee roasters, varnish kettles, tar kettles and similar equipment shall be anthracite, coke, gas or oil.

5. Open Fire and Dumps /Rule 12/.

Burning garbage, refuse, rubbish or other combustible material prohibited except under definite restrictions prescribed by the Department and under permit of Fire Department.

6. Incineration and Disposal Equipment /Rule 13/.

/a/ Applicable to any device, apparatus equipment or structure used for destroying, reducing or salvaging by fire any material or substance including refuse, rubbish, garbage, debris or scrap, or facilities for cremating human or animal remains. Crematories are included in this Rule.

/b/ The design and construction of incinerators hereafter installed must be in full compliance with generally accepted standards.

/c/ Incineration and disposal equipment hereafter installed shall have:

/1/ Provisions for burning auxiliary fuel in sufficient quantity to assure the complete combustion of refuse and of unburned gases within the furnace.

/2/ A means of regulating the draft within the furnace, chimney or other portions of the installation.

/3/ A settling chamber or other device, acceptable to the Commissioner to prevent escape of solid particulate matter.

/d/ Single flue incinerators hereafter installed shall be provided with a means to prevent opening of hopper doors when burning occurs. Where remote control device is provided, an adequate visual signal shall be provided to show that the hopper doors are closed and locked.

/e/ Burning of material in incineration and disposal equipment is restricted to hours between 7 A.M. and 5 P.M. of the same day. On or before 5 P.M. the fire shall be completely extinguished and the materials in the firebox removed. Commissioner may give written permission to operate incinerator or disposal equipment at other hours.

/f/ Burning of materials in an incinerator provided with auxiliary fuel without the auxiliary fuel being concurrently used is prohibited.

/g/ Operating incineration and disposal equipment without required controls and devices prohibited.

/h/ Such equipment to be maintained in good operating order.

/i/ Auxiliary burners, hereafter installed must have ignition failure protection controls.

/j/ Flue fed incinerators must be provided with:

/1/ A primary combustion chamber.

/2/ A secondary combustion chamber.

/3/ Provision for supplying auxiliary heat in sufficient quantity to consume completely any unburned gases produced in primary combustion chamber.

/4/ A settling chamber large enough to reduce gas velocity sufficiently to permit settling out of fly ash particles.

/5/ A means of regulating the draft.

/k/ No gas pressure allowed either in the incinerator or the feeding flue which will permit the escape of combustion gases into the building.

B. Specific Pollutants

1. Dense Smoke /Rule 1/.

Emission of dense smoke from any fuel or refuse-burning equipment, including internal combustion engine, locomotive, marine craft, open fire, incinerator, premises or vessel in city or on its waters, prohibited.

/a/ Exception: where fire box is being cleaned or a new fire being built in a cold boiler or furnace, dense smoke may be emitted for a period of 4 continuous minutes.

/b/ Dense smoke defined as smoke so dense that it cannot be seen through at the point of emission or equal to or of greater opacity, density or shade than No. 3 Ringelmann.

2. Less than Dense Smoke

Emission of less than dense smoke from any fuel or refuse-burning equipment, including internal combustion engine, locomotive, marine craft, open fire, incinerator, premises or vessel in city or on its waters in excess of 2 continuous minutes in any one hour, prohibited.

3. Dust

/a/ Emission from the stack of any boiler plant, or allowing to pass a convenient measuring point adjacent to the stack outlet, dust in gases to exceed concentrations set forth in table:

Steam Generated Pounds Per Hour	Pounds Dust Per 1,000 Pounds Steam
100,000 or less	2.2
150,000	1.9
200,000	1.7
300,000	1.4
400,000	1.2
500,000	1.1
600,000	1.0
800,000	0.9
1,000,000	0.8

/1/ Steam generated in Table shall be the average hourly output of all units connected to chimney for that continuous 4-hour period during which the average output is the greatest expressed as the equivalent of steam containing 1,000 B.T.U.'s per pound.

/2/ Dust emission concentration figures, above, may be exceeded during the cleaning periods, provided the methods used and the period of time are approved by the Commissioner.

/b/ Emission from any fuel-burning or refuse-burning equipment not used for steam generation, or allowing to pass a convenient measuring point adjacent to the stack, outlet, dust in gases to exceed 0.85 pound per thousand pounds of gases, of which amount not to exceed 0.40 pound per thousand pounds of gases shall be of such size as to be retained on the 325-mesh U. S. Standard Sieve, adjusted to 50 percent excess air for products of combustion.

/c/ Amount of solids in gases to be determined according to Test Code of A.S.M.E.

/d/ Ocean going vessels shall not operate soot blowers while within the waters under the jurisdiction of the City.

4. Particulate and Other Matter

/a/ Emission from any fuel or refuse-burning equipment internal combustion engine, locomotive, vehicle, incinerator, open fire, floating equipment, premises, industrial process, or any other source, any air contaminant harmful or objectionable substance, including smoke, soot, fly ash, dust, fumes, gases, vapors, nuisance odors, that may be a detriment to the property of others or that may be a nuisance to any person not being thereon engaged.

/b/ Except as provided in IV B 3, above, discharge or emission from any source of particulate matter in excess of 0.85 pound per thousand pounds of gases, adjusted to 50 percent excess air for products of combustion, is prohibited.

/c/ Transportation, processing, handling and storing of all fuels shall be conducted in such manner as will not create any public or private nuisance and is subject to provisions of IV B 4 /a/, above. /Rule 14.1/.

C. Volatility /Rule 14/.

1. Board shall specify the volatile content of the solid fuel which may be consumed in hand-fired equipment, provided:

/a/ A fuel will not be specified whose volatile content is in excess of the volatile content of the fuel now being used by any person hand-firing.

/b/ A fuel will not be specified for hand-firing with a volatile content in excess of 24 percent on an ash and moisture-free basis. Any solid fuel with a volatile content in excess of this shall be burned in mechanical fuel-burning equipment only.

2. Consumption, use, importation, storage, sale, delivery or transportation of any solid fuel for hand-firing not meeting the standards for hand-firing equipment, prohibited.

V. Enforcement

A. Sealing

1. Commissioner empowered to seal any equipment installed or operated without a permit. He may also, after notice and hearing, seal any equipment or prohibit any process responsible for the emission of harmful or objectionable substances and may prohibit operation thereof until an operating permit is obtained. /Code, Chap. 47, Sec. 1072 - 6.0/.

2. When person owning or controlling any premises, motor vehicle, floating equipment or portable equipment, including locomotives, has been previously notified of 3 or more violations of the emission prohibitions within a consecutive 12 month period, Commissioner may notify him to show cause why the equipment causing such violations should not be sealed. Upon hearing, if Commissioner finds adequate corrective means have not been employed to correct cause of violation, then Commissioner shall order such equipment sealed until the person submits a statement of the intended changes in equipment with a definite plan for their accomplishment and the approximate date of compliance which meets the approval of the Commissioner.

3. Commissioner may seal any equipment violating the permit requirements and the operating certificate requirements. /Rule 1.5/.

B. Period of Grace

When an emission violating Rules is found, Commissioner may refrain from legal action upon receipt of a stipulation, from the owner or operator, that immediate adjustments, additions or alterations will be made, which in the Commissioner's opinion, will be effective in abating the violation. The time period for such adjustments, additions or alterations must be approved by Commissioner. /Rule 1.4.1/.

C. Unlawful Acts /Rule 17/.

1. Refusal to comply with Rules and Regulations.

2. Assisting in violation of Rules and Regulations.

3. Interfering with Commissioner or personnel of Department of Air Pollution in performance of their duties.

4. Refusal entrance, at reasonable hours and after proper identification, to any premises which is in violation of Rules and Regulations.

5. Refusal to permit examination of premises.

D. Procedure /Rule 5/.

1. Applicant must be notified in writing of refusal of application for permit or certificate of approval. Notification will include reasons for disapproval.

/a/ If the objections are unanswered for 60 calendar days, the application is automatically cancelled. Reinstatement, obtained at the discretion of Commissioner. Request for reinstatement must contain satisfactory answers to the objections.

/b/ If applicant has been notified that permit is being withheld because there is no Certificate of Workmen's Compensation Insurance on file covering contractor and such certificate is not filed within 60 days from date of notification, application will be automatically cancelled and all fees forfeited.

2. If application has not been acted upon within 30 days, applicant may appeal to Commissioner.

E. Penalties

Conviction of violation of Code, Rule or Regulation or order or decision of Board or Commissioner, is punishable by a fine of not less than $25 nor more than $100, or by imprisonment for not more than 3 months, or both, for the first offense; and by fine of not more than $50 nor more than $500, or by imprisonment for not more than 6 months or both, for a second or subsequent offense. /Code sec. 1074-3.0/.

VI. Preventive Programs

A. Permits

1. Installation and alteration or construction of any equipment, including fuel-burning equipment, capable of emitting any harmful or objectionable substance, including smoke, soot, fly ash, dust, fumes, gas, vapors or odors or equipment intended for eliminating, reducing or controlling emissions. Prohibited, unless an application including plans and specifications has been filed and an installation or alteration permit has been issued by the Commissioner. Construction, installation or alteration cannot be performed in non-conformance with plans and specifications so filed. /Code sec. 1072-3.0; Rule 2.1/.

/a/ Exemptions from Rule 2.1:

/1/ Fuel-burning equipment of any size in any premises occupied exclusively as a dwelling by no more than two families.

/2/ Fuel-burning equipment having a maximum input in excess of 150,000 B.T.U.'s per hour.

/3/ Fuel-burning equipment using natural gas as fuel at a maximum input not in excess of 350,000 B.T.U.'s for hot water supply or for the heating or air conditioning of a building.

/4/ Fuel-burning equipment other than /1/ and /3/, having a maximum input in excess of 150,000 B.T.U.'s per hour and not exceeding 350,000 B.T.U.'s per hour. /Rule 2.1.1/.

/b/ Owner or agent, of equipment specified in /4/ shall certify such information with respect to the equipment as shall be required by the Department. /Rule 2.1.2/.

/1/ Fuel-burning equipment using natural gas at a rate in excess of 350,000 B.T.U.'s per hour for hot water supply or for the heating or air conditioning of a building, shall, prior to commencement or alteration, be registered by the owner with the Department, and shall not be operated until a Certificate of Operation has been issued. /Rule 2.1.2.1/.

/2/ Where existing fuel-burning equipment for which a certificate of operation has been issued is to be altered solely to change the fuel used to natural gas on a permanent or alternate basis and the equipment is used for hot water supply or for heating or air conditioning of a building, the alteration is exempt from Rule 2.1. Prior to the commencement of the alteration an amendment to original application to be filed with Department for the purpose of obtaining a new certificate of operation. The equipment shall not be operated until the new certificate of operation has been issued. /Rule 2.1.2.2/.

/c/ Internal combustion engines, marine installations, portable equipment, vents from sanitary or storm drainage systems, exhaust fans used solely for ventilation or air conditioning in other than industrial processes, steam or air safety valve vents, storage tank vents, other equipment which does not emit smoke, soot, fly ash, dust, fumes, gas, vapors or odors, as determined by the Commission, are exempted from filing requirement, as well as repairs of previously approved furnace, fuel-burning equipment and minor alterations. /Rules 2.1.3, 2.1.4, and 2.1.5/.

/d/ Commissioner may grant permission to proceed with construction, installation or alteration of fuel and refuse-burning equipment in cases requiring prior approval and a permit in order to allow the work to proceed pending examination and final approval of plans and issuance of the permit. But such permission is not to be granted until applicant has filed a complete set of plans and specifications and his personal or corporate bond conditioned for payment of any loss, damage or injury to persons or property for failure to install such equipment in accordance with plans, and the laws, rules and regulations of the state and city, relative to the installation of fuel and refuse-burning equipment. /Rule 2.1.6/.

/e/ Permit automatically cancelled if work not started within one year of issue or if work suspended for more than one year. Commissioner may approve written application for extension. /Rule 2.2/.

/f/ Fees specified in Rule 23.

2. Application for Permit /Rule 3/.

Applications for permit to be completely filled out on forms furnished by the Department and filed by the owner or his agent. They shall be verified and sworn to. Each application to be accompanied by two sets of plans and specifications. Each application to include a statement, certified by a licensed professional engineer, as to the size, capacity and load of the equipment to be used.

3. Plans and Specifications /Rule 4/.

Plans and specifications must be of professional quality and in detail. Separate specifications to be filed with each set of plans. They must show the proposed means for control of emission and calculations of heating, power process or other loads on and the capacity of the fuel-burning equipment and the type and quality of fuel to be used.

4. Alterations /Rule 16/.

Emergency repair or replacement, which is not within category of minor alteration, may be made prior to the application for and issuance of a permit if delay in doing such work might result in danger to life or property in the supplying of essential services, provided, that in every case an application for a permit shall be filed not later than within 48 hours after the starting of such repair or replacement work.

B. Operating Permits /Rule 6/.

1. Use of new, remodeled or reconstructed equipment prohibited, unless an operating permit is obtained, except following equipment:

/a/ Fuel-burning equipment and space heaters in all 1 and 2 family dwellings and other installations below 150,000 B.T.U.'s per hour input.

/b/ Equipment wherein the maximum fuel input is in excess of 150,000 B.T.U.'s per hour and does not exceed 350,000 B.T.U.'s per hour which requires a certificate specified in VI A 1 /b/.

/c/ Internal combustion engines, marine installation and locomotives.

/d/ Repairs to previously approved equipment.

/e/ Motor alteration.

2. Certificate to be issued when the work has been inspected and approved by the Commissioner. Certificate to be conspicuously displayed in boiler or furnace room.

3. Issuance of certificate shall not exempt person, equipment or process from full compliance with emission prohibitions.

C. Registration /Rule 1.4.2/.

1. Commissioner may require written registration of points of emission of air pollution, whether by stack, duct, flue or other means, when he deems such information necessary. A period of 60 days allowed for filing of registration, but in an emergency, the Commissioner may designate a lessor. Commissioner is empowered to notify the owner, when he deems registration no longer required.

2. Registration to include location of points of emission, size and height of outlets, rate of emission, composition and temperature of effluent or emission, and such other data as may be requested by the Commissioner.

D. Testing /Rule 7/.

1. Commissioner may require a test of new or altered installation, at the expense of person receiving certificate or approval. Notice of test to be given at least 15 days in advance.

2. Samples may be taken and analyses made of any fuel used in installations covered by these rules to determine whether they are of the grade and character called for in the specifications or permits, or suitable for the equipment installed. Analysis to be made at expense of owner.

3. Commissioner may require owner or operator of any equipment or device to submit an analysis of the discharge of his stack, exhaust or vent. Analysis to include type and quantity of gases being discharged as well as the quantity, quality and character of solid matter. Tests to be conducted by or under supervision of licensed Professional Engineer.

E. Licensing /Rule 15/.

All oil burners to be under supervision of licensed oil-burner operator except those where evidence is filed showing periodic servicing during each 30 day period.

Oil-burners where maximum fuel input will not exceed 850,000 B.T.U.'s per hour, excepted.

NIAGARA FALLS, N. Y.

I. Ordinance

City Charter Article XVII; City Ordinance Chapter XI; Rules and Regulations. Revised 1957.

II. General Statement

An ordinance to decrease the emission of dusts, gases, fumes, mists, vapors, smokes and odors by establishing permissible standards, regulating fuel-burning equipment, prohibiting certain discharges into city sewers, requiring installation and operating permits, and imposing penalties for violations. Government corporations, departments, bureaus and agencies are included within the definition of person.

III. Administrative Organization

A. Department of Air Pollution Control, headed by the Director of Air Pollution Control appointed by the City Manager with the approval of City Council, and whose duties shall include:

1. investigation and inquiry into the emission of air pollutants

2. enforcement of all laws, ordinances, rules and regulations respecting the control of such emissions

3. recommendation to the Board of the adoption of /Charter, Sec. 411/.

B. Air Pollution Control Board, of 5 members appointed by the Mayor, whose powers shall include:

1. Reviewing any order or decision of the Director appealed to the Board in writing. /Charter, Sec. 414/.

2. Sealing non-complying equipment after notice and hearing. /Charter, Sec. 415/.

3. Adopting, subject to the approval of City Council, rules and regulations for the control of emissions into the open air /Charter, Sec. 413/. No such rule or regulation shall be adopted unless a public hearing has been held thereon. Public notice thereof shall have been given at least 30 days before. If approved by the Board, notice shall be given to City Council. Upon approval by City Council, the rule, regulation or amendment shall become effective as a part of this

Ordinance. /Ord., Chap. XI, Sec. 7/.

IV. Applicability

A. Sources

1. No person shall operate or maintain any equipment or device which will cause the emission of dusts, gases, fumes, mists, vapors, smokes or odors without operating in conjunction therewith such equipment, means, method, device or contrivance as will reduce the emission of such matter to quantities not violative of this Ordinance. /Rules and Regulations, Art. II, Sec. 2/.

2. No person shall discharge into city sewers any inflammable materials; organic compounds having a highly persistent or pungent odor; or any of the following classes of material unless they have been neutralized or otherwise rendered innocuous:

/a/ acids or alkalies, organic or inorganic

/b/ corrosive or acid gases; chlorine or bleaching materials

/c/ hydrogen sulfide, sulfides, sulfites, or organic sulfur compounds

/d/ phosphorus or phosphorus compounds

/e/ any chemical or physical substance /other than normal sanitary wastes/ which has an offensive or disagreeable odor or which possesses properties such as may cause it to be classed as a nuisance when discharged into the city sewers. /Rules and Regulations, Art. II, Secs. 3, 4/.

3. The top of any stack shall extend sufficiently above the roof of the building of which it is a part, and shall extend above or be far enough from any nearby building to prevent the creation of a nuisance by the discharge of the products of combustion. No stack used in connection with commercial or industrial buildings for emission of materials which might cause a nuisance shall be less than 35 feet high above the ground line. Size and height of stack for power boilers shall be approved by the Director. /Rules and Regulations, Art. II, Sec. 6/.

4. All new installations of pulverized fuel-burning equipment, spreader stokers, or any similar suspension-burning types, except locomotives,

locomotive cranes, and mobile equipment, shall be provided with dust-separating equipment if considered necessary by the Director. /Rules and Regulations, Art. II, Sec. 7/.

5. If oil or gas is used as fuel, visible discharge of soot, smoke, or other forms of incomplete combustion is prohibited. /Rules and Regulations, Art. II, Sec. 8/.

6. Portable Boilers and Miscellaneous Portable Equipment:

/a/ All existing portable boilers /except locomotives, or locomotive cranes/ shall use only coke, gas, oil or anthracite coal as fuel. If gas or oil is used, the type of burner shall be approved by the Director.

/b/ The Director shall have authority to attach identification tags to all portable boilers, power shovels, road rollers, hoists, derricks, pile drivers, tar kettles, asphalt kettles, and any other portable equipment capable of emitting smoke.

/c/ No tar kettles or asphalt kettles shall be used with an open fire. Both shall burn coke or shall be equipped with oil burners approved by the Director.

/d/ All new equipment such as power shovels, road rollers, hoists, derricks, pile drivers, and similar portable equipment shall be of internal combustion engine type or shall be electrically driven. /Rules and Regulations, Art II, Sec. 10/.

7. No person tearing down or wrecking any building or structure shall burn tar paper, refuse or rubbish in an open fire at the site. No person shall burn any garbage, refuse or rubbish in an open fire except at a place duly approved by the Director. /Rules and Regulation, Art II, Sec. 12/.

B. Specific Pollutants

1. No person shall cause or allow to be emitted into the open air any foreign materials such as dusts, gases, fumes, mists, vapors, smokes, and odors in quantities which by reason of their objectionable properties, shall be considered a nuisance because they:

/a/ Injure, or have a tendency to injure the health, comfort or safety of any person or the public

/b/ Create a disagreeable or unnatural odor in the atmosphere

/c/ Cause damage to property or inconvenience to property owners

/d/ Create a nuisance or hazard by obscuring vision

/e/ Have a deleterious effect upon trees, plants or other forms of vegetation. /Rules and Regulations, Art. II, Sec. 1/.

2. Dust shall not be discharged from any fuel-burning equipment or premises in excess of 0.85 lbs./1000 lbs. of gases, adjusted to 12 percent CO2 content, except that in no case shall more than 15 percent of the total dust measured before entering the collecting device be emitted from the stack. Measurement shall be according to the A.S.M.E. Test Code. /Rules and Regulations, Art. II, Sec 5/.

3. No smoke shall be discharged from any fuel-burning equipment, internal combustion engine, premises or open fire excepting railroad locomotives, locomotive cranes, or vehicles, the shade of which is equal to No. 2 Ringelmann for a period aggregating 4 minutes or more in any 30 minutes, or the density of which is equal to but not greater than No. 3 Ringelmann except for periods aggregating 3 minutes in any 15 minutes when building a new fire, or when an equipment breakdown causes an unpreventable emission. /Rules and Regulations, Art. II, Sec. 9/.

/a/ All railroad roundhouses or fire-building stations, where steam is raised in locomotives, shall be so equipped that fires may be built and steam raised in cold locomotives without the production of smoke of a density greater than No. 3 Ringelmann for a period of more than 6 minutes in one hour. All locomotives stationed thereat shall be equipped with devices by means of which fires may be cleaned and built, and steam raised in cold locomotives without the production of smoke of that density for a period of more than 6 minutes in one hour.

/b/ Locomotives or other vehicles shall not emit smoke of a density greater than No. 2 Ringelmann for more than 1 minute at any one time, and for more than 3 such one-minute periods in any 18 minutes.

/c/ The Director may require any locomotive used permanently or temporarily in the City to be equipped with an approved advice for smoke elimination if it violates paragraph /b./ above. /Rules and Regulations, Art. II, Sec. 11/.

V. Enforcement

A. Unlawful Conduct

1. To hinder or interfere with the Director or his staff in their enforcement of this ordinance, or refuse them entry at reasonable hours to premises containing equipment which discharges pollutants. /Ord., Chap. XI, Sec. 15/.

2. To violate the seal of any equipment sealed at the direction of the Director without his written authorization to do so. /Ord., Chap. XI, Sec. 16/.

B. Inspection and Testing /Rules and Regulations, Art. IV, Secs. 2-6/.

1. The Director shall have authority to enter on any premises where equipment is emitting pollutants to examine it and make whatever tests and measurements he deems necessary.

2. Persons using such equipment shall provide reasonably located sampling holes and closures in such point in any ducts, stacks or enclosures as the Director may request. Locomotives, locomotive cranes, and mobile equipment are exempted from these requirements.

3. Any person using such equipment shall provide the Director with a source of electric power at 110 volts and with characteristics as may be available at or adjacent to the site of /locomotives, locomotive cranes, and mobile equipment are exempted from the requirements/ the test sufficient to operate the sampling apparatus he may employ.

4. Any person using such equipment shall allow the Director access thereto and, on request, inform him as to when it is to be operated at the conditions and capacities at which he wishes to take samples. He shall make such measurements or take such samples as he deems necessary, and the average of analyses of all samples shall be used to determine the concentration. All such sampling shall be at the discretion of the Director or of the Board.

C. Reports

1. Persons selling fuel- or refuse-burning equipment or devices which are required to be connected to a vent or stack must report every sale of such equipment or device to be installed or used in the city to the

Department, and the purchaser or his agent must give the seller a signed written statement setting forth the address at which the equipment is to be installed or used.

These reports shall be filed, in writing, within 7 days of the sale, and shall contain the name and address of the purchaser and the location of the building in which the equipment is to be installed or used.

The provisions hereof shall not apply to equipment using anthracite coal, coke, oil or gas as a fuel, and to wholesale transactions made for the purpose of resale.

Any false statement made in connection herewith shall be a violation of this chapter. /Rules and Regulations, Art. II, Sec. 13/.

2. Both buyers and sellers of high volatile coal /over 23 percent volatile content on a moisture free basis/ shall report each sale within the city to the Department, in writing, within 7 days, containing the name and address of the purchaser and the location of the building in which the fuel is to be used. /Rules and Regulations, Art. II, Sec. 14/.

D. Sealing

1. Any person previously convicted of 2 violations respecting emissions, within 12 consecutive months shall be notified to show cause before the Board on a specified date, not less than 10 days from date of the notice, why the offending equipment should not be sealed. The person may appear and be heard, and if the Board finds that adequate corrective measures have not been taken, may seal the equipment until an installation permit and an operating permit has been issued therefor. /Ord., Chap XI, Sec. 9/.

2. Violation of the installation permit shall be sufficient cause for the Director to stop all work and seal the installation. Further work shall not proceed until the violation is corrected and the work done in accordance with the permit. /Ord., Chap. XI, Sec. 11/.

3. The Director is authorized to seal any equipment put in operation before an operating permit has been obtained as herein required. /Ord., Chap. XI, Sec. 12/.

E. Procedure

1. The Director is required to report to the Board the name of any contractor, installer, manufacturer, or agent therefor, of control equipment, fuel-burning equipment, industrial or commercial process or power plant equipment, except locomotives, locomotive cranes and mobile equipment, who wilfully and persistently violates the requirements of prior filing of plans and specifications for installation, extension, and alteration of control equipment. At the same time he shall furnish the Board with a list of such violations. The Board may then, at its discretion, hold a public hearing at which the alleged violator shall be invited to show cause why the Board should not instruct the Director to seal the equipment until it conforms to these rules and regulations or to refuse to accept or approve further plans, specifications, or installations from or made by the alleged violator, or both. After such hearing, the Board may, at its discretion, so instruct the Director, who shall be bound by such instruction until further notice from the Board. /Rules and Regulations, Art. III, Sec. 8/.

2. Appeals - /authorized by Ord., Chap. XI, Sec. 8/.

/a/ may be taken from any decision, ruling, regulation, or order of the Director, to the Board, within 10 days of written notice of the action complained of. They shall be filed with the Director on a form supplied by him, specifying the grounds therefor and the relief sought. Each appeal shall be accompanied by a $10 fee, to be forfeited on affirmance or refunded on reversal.

/b/ The Director shall transmit to the Board all papers, etc., constituting the record of the matter in question.

/c/ The Board shall schedule a hearing for not less than 5 nor more than 10 days from the filing of the appeal. The appeal shall act as a stay of the decision in question. The Board shall rule within a period of 10 days after the hearing.

/d/ The decision of the Board shall be binding on the Director. /Rules and Regulations, Art. V, Secs. 1-4/.

3. Review: The decisions, orders or determinations of the Board may be reviewed by certiorari proceedings in the Supreme Court of the State of New York, in accordance with the provisions of the Civil Practice Act. /Charter, Art. XVII, Sec. 417/.

F. Penalties

Any person convicted of a violation of this Ordinance shall be liable to a fine of not less than $10 nor more than $100 upon the first offense, and in the event of a second offense, a fine of not less than $50 nor more than $500. Each day's violation shall constitute a separate offense. /Ord., Chap. XI, Sec. 20/.

VI. Preventive Programs /not applicable to locomotives, locomotive cranes or mobile equipment/

A. Installation Permits /unless otherwise indicated, the source is Article III of the Rules and Regulations/

1. Required for the construction, installation, or alteration of any equipment emitting pollutants into the open air, except:

/a/ minor alterations and alterations which do not change the effective character of the equipment or process affected

/b/ equipment of a temporary and experimental character

/c/ any equipment, related to and part of a secret process, which does not relate to the direct emission of pollutants. /Ord., Chap. XI, Sec. 10/.

2. Applications - shall be submitted in duplicate on forms supplied by the Director, and shall be accompanied by plans and specifications and a $2 fee.

3. Plans must conform to the following regulations:

/a/ filed in duplicate in the department during office hours

/b/ must be of professional quality

/c/ must, if for industrial and commercial installations, be prepared under the direction of a licensed professional engineer, and bear his seal

/d/ specifications may be separate from the plans, or written directly thereon

/e/ must clearly show:

/1/ an outline of the portion of the building in which the equipment is to be installed.

/2/ the name and location with respect to the building floor plan of each machine or process to be connected to the control equipment.

/3/ plan and elevation views of control equipment, drawn to scale, with ducts, stacks, and chimneys shown by double lines, and with scale indicated on drawing.

/4/ the sizes of all ducts, stacks, and chimneys.

/5/ type, design, size, rating, and horsepower of each fan employed.

/6/ location of the point of discharge of the control equipment with respect to the proximity of windows, doors, and other openings of the premises and adjacent premises.

/7/ construction details of the control equipment employed, except that when standard commercial equipment is used, the manufacturer's catalog number will be considered sufficient.

/8/ location of clean-outs, cross-section and elevation-section of the furnace, oven, kiln or still using liquid or solid fuel-fired apparatus, except as hereinafter excepted.

4. Specifications must be in such detail that when read with the plans they will clearly reveal the proposed means for controlling emission, the extent of control anticipated in the design of the control equipment. When standard commercial equipment is used, the manufacturer's catalog number will be considered sufficient.

5. If plans and specifications are submitted by an agent, they must be accompanied by a letter of authorization from the owner in form satisfactory to the Director.

6. Applications shall be acted on within 10 days of filing, and if rejected, the reasons therefor shall be stated in writing to the applicant.

7. Specifications must stipulate that a test will be made of the completed installation, and who will make it. The expense thereof shall be borne by the person making the installation, who must notify the Director of the time and place of the test.

8. Notice of the completion of work and readiness for tests shall be given to the Director, in writing,

not more than 30 days thereafter, stipulating when and by whom the test will be made. The Director or his agent shall witness the test.

9. Nothing herein shall be deemed to abridge the rights of the Director to conduct tests of these installations on behalf of the city.

B. Operating Permits /unless otherwise indicated, the source is Article III of the Rules and Regulations/

1. Required for the use of any new or altered equipment for which an installation permit was required or issued. /Ord., Chap. XI, Sec. 12/.

2. Shall be issued by the Director after completion and testing required in VI A above, approved by the Director. Such equipment shall not be put into service if an operating permit is denied.

C. Secret Processes and Other Exemptions /unless otherwise indicated, the source is Article III of the Rules and Regulations/

1. In order to be exempted from the filing of plans and specifications on the ground that the installation is a secret process, an affidavit must be filed with the Director stipulating:

/a/ the location of such process or equipment, specifying the building and section thereof in which same is located

/b/ the name by which the process or equipment is known in the plant

/c/ the means to be employed for the control of emission of said effluents

/d/ the nature and estimated quantity of air-borne effluents from said control means into the open air

/e/ the diameter, height and location of the ducts, stacks, and chimneys, discharging said effluents into the open air

/f/ the authority of the person signing the affidavit to do so

/g/ a statement that said installation relates to a secret process.

2. Affidavits shall be accompanied by a set of plans and specifications complying in all other respects with these rules covering that part of the installation process, or equipment directly emitting effluents into the air.

3. Alterations, reconstruction, and extension of systems covered by such affidavits shall be constructed in accordance to the rules and regulations relating to secret processes.

4. In order to be exempted from the filing of plans and specifications on the ground that the installation is temporary and experimental, an affidavit must be filed with the Director stipulating:

/a/ the location of such installation, specifying the building and section thereof in which same is located.

/b/ the products produced by said installation.

/c/ the name by which said installation or equipment is known in the plant.

/d/ the time interval for which such temporary exemption is requested.

/e/ a statement that the installation is experimental, having features materially differing from standard practice in the act.

/f/ the authority of the person signing the affidavit to do so.

5. At the end of the time interval granted, the Director shall notify the owner, and inform him of the need to request an extension or file plans and specifications as otherwise required. Plans and specifications will be required if no extension is requested, or, if requested, is denied by the Board on the grounds that the installation is not temporary.

6. Minor alterations, i.e., those which do not change the effective character of the effluents, may be exempted as the Director determines. To be effective, his determination shall be a written response to a written request for an exemption.

7. In order to be exempted from the filing of plans and specifications on the ground that the equipment shall be used exclusively for the combustion of anthracite coal, coke, or gas, an affidavit must be filed with the Director stipulating:

/a/ the location of the installation, specifying the building and section thereof in which same is located.

/b/ the boiler, furnace, heater, or other fuel-burning equipment; its make, type, and size.

/c/ method of firing; if mechanized, rate, type, and size of firing device.

/d/ the fuel.

/e/ the authority of the signer to make such affidavit.

/f/ such affidavit shall be binding upon the property in the event of subsequent transfer of title.

8. Such affidavit may be refused by the Director when, in his opinion, use of anthracite coal, coke, or gas is impracticable in connection with such installations.

9. When anthracite coal, coke, or gas is used as a fuel in any industrial process, furnace, kiln, oven, or still in which the material, substance, or product heated gives off to the outer air any dusts, gases, fumes, mists, vapors, smokes, and odors, that portion of the furnace, kiln, oven, or still containing the material, substance, or product and the connection therefrom to the outer air shall not be exempted by the above affidavit from the requirements for the filing of plans and specifications therefor as elsewhere required by these rules, regardless of whether said furnace, kiln, oven, or still is directly or indirectly fired or heated.

VII. Miscellaneous

No permit for the erection, construction, or alteration of any building, plant, or structure having fuel-burning equipment installed therein for the purpose of supplying heat, hot water, incineration, or power shall be issued by any City Department until the Director has issued an installation permit covering said fuel-burning equipment under his jurisdiction to be used in said building, or structure, or has indicated by approval of the plans, that in his judgment the plan submitted will permit the installation of facilities adequate for compliance with the provisions of the Ordinance. Provided, however, that the owner of such building, plant or structure, may, in lieu of the above provision, file an affidavit with the Director certifying that said fuel-burning equipment shall be used exclusively for the combustion of anthracite coal or coke. /Ord., Chap. XI, Sec. 13/.

POUGHKEEPSIE, N. Y.

I. Ordinance

Smoke Control Ordinance /December 1, 1951/.

II. General Statement

Ordinance controls emission of smoke, dusts and odors, and vests powers in an air pollution inspector who may inspect, investigate, require tests and issue installation permits. In definitions section "person" includes any department, bureau or agency of city and any other public body or agency.

III. Administrative Organization

Air Pollution Inspector given powers to make such inspections and investigations as are necessary to administer and enforce ordinance. He may delegate authority, subject to the approval of board of Aldermen. He may require test to establish compliance with standards set out in ordinance. /sec. 6/. He issues installation permits. /sec. 7/.

IV. Applicability

A. Sources

Domestic installations; apartment house, office building, school, hotel, loft building, hospital and similar installations; stationery installations; railroad locomotives; building fresh fires; other stationery installations.
Regulated pursuant standards of Table I. /sec. 3/.

B. Specific Pollutants

1. Smoke - discharge or emission of smoke shade or density darker than that specified and for duration shown in Table I. /sec. 3/.

   Ringelmann Chart or other charts of equivalent shades of grey incorporated into ordinance by reference.

2. Odor - emission of odors into open air, in such quantity as to create public nuisance to detriment of public welfare of health. Section does not apply to moving vehicle or locomotive remaining in city for less than 30 minutes during 24 hour period in which emission occurred. /sec. 5/.

C. Volatility

"No person shall cause, suffer or allow to be discharged or emitted into the open air from any stack permanently installed in a stationary building or structure, or to pass a convenient measuring point in the connection from the source of dust to such stack, dust in the air or gases in excess of 0.85 pounds of dust per 1000 pounds of air or gases, and in excess of 0.20 pounds of dust larger than that which will pass through a United States Standard 325 mesh sieve per 1000 pounds of air or gases. In the case of gases from combustion processes the 1000 pounds of gases shall be adjusted to 50 percent excess air." Amount of solids in gases determined according to accepted engineering practices. /sec. 4/.

V. Enforcement

A. Tests and Inspections

Air Pollution Inspector shall require test to establish compliance with standards. He may accept test conducted by representative of owner of installation or he may himself or by authorized representative conduct test. He must be allowed access to installation at reasonable hours for this purpose. He has authority with approval of common council to engage services of specialists for such tests. /sec. 10/.

B. Unlawful acts

1. Burning garbage, refuse or rubbish in open fire within city limits except as prescribed by Fire Chief. Fire Chief to enforce this section. /sec. 11/.

2. Interference with Air Pollution Inspector or Fire Chief or their agents. Refusal to permit entrance to premises containing equipment or open fire discharging smoke dust or odor into open air. /sec. 12/.

C. Penalties

1. All persons causing, permitting or participating in violation of ordinance individually and collectively liable. /sec. 13/.

2. Conviction of violation of ordinance, punishable by fine of not more than $100 for first offense, by fine of not more than $200, or by imprisonment for not more than 6 months, or both for second or subsequent offense. /sec. 15/.

VI. Preventive Programs

A. Permits

1. Construction, reconstruction, installation, or alteration of any fuel-burning equipment capable of emitting smoke dust or odor unlawful --- until application for installation permit, listing equipment and showing means to comply with standards of ordinance, filed with Air Pollution Inspector, fee /$5.00/ paid and installation permit issued by him. Construction, reconstruction, installation or alteration must conform to permit. Plans and specifications may be submitted. Exceptions: /1/ Standard commercial gas-fired equipment; /2/ Standard commercial oil-fired equipment buring #1 and #2 fuel oil; /3/ Standard commercial solid fuel-fired equipment when maximum fuel input will not exceed 350,000 BTU per hour; /4/ Equipment not permanently installed in stationary building or structure; /5/ Repairs or minor alterations to approved equipment or to equipment installed prior to effective date of ordinance; /6/ Industrial exhaust systems certified by state. /sec. 7/.

2. Inspector to act on all applications within reasonable time, shall give written notification of action on application. Denial of application must include reasons. Conditional approvals authorized. /sec. 8/.

3. Inspector to be notified of completion of work and he or his authorized agent must promptly inspect installation for compliance with application, permit and ordinance. He may require tests. /sec. 9/.

TABLE I

	TYPE OF INSTALLATION	LIMITING DENSITY, SHADE OR APPEARANCE OF SMOKE
A.	Domestic installations primarily for heating and hot water, in one and two family dwellings.	Not darker than shade #1.
B.	Installations, primarily for heating and hot water in apartment houses, office buildings, schools, hotels, loft buildings, hospitals and other installations of similar character.	Not darker than Shade #1 except that smoke not darker than Shade #3 is permitted for not more than a total of 4 minutes in any period of 30 minutes.

Poughkeepsie, N. Y. (Cont.)

C. All other stationary installations except those included in Paragraph F hereof.	Not darker than Shade #2 except that smoke not darker than Shade #3 is permitted for not more than a total of 4 minutes in any period of 30 minutes.
D. Railroad Locomotives.	Not darker than Shade #2 except that smoke not darker than Shade #3 is permitted for not more than a total of 1 minute in any period of 6 minutes for a locomotive in motion, or for not more than a total of 4 minutes in any period of 30 minutes for a locomotive not in motion.
E. For building a wholly fresh fire in a cold fire box.	In railroad locomotives, not darker than Shade #3 is permitted for not more than 12 consecutive minutes in any period of 24 hours in other installations, not darker than Shade #3 is permitted for not more than 20 consecutive minutes while such fire is being built.
F. For installations using a fuel input in excess of 25,000,000 BTU per hour, the primary purpose of which is to provide standby and emergency facilities for maintaining essential public utility services.	Not darker than Shade #2 except that smoke not darker than Shade #3 is permitted for not more than a total of 10 minutes in any period of 30 minutes.

SYRACUSE, N. Y.

I. Ordinance

Ordinance approving the Rules and Regulations of the City Engineer pertaining to Smoke and Air Pollution Control, February 16, 1948, as amended June 21, 1948 and August 2, 1948.

II. General Statement

These Rules and Regulations list prohibited emissions; prohibit the sale of certain coals; requires registration by solid fuel dealers and dealers and installers of fuel-burning equipment; provides for installation permits; and provides for enforcement procedure and penalties for violations. Technical requirements for certain equipment are listed.

III. Administrative Organization

Division of Smoke and Air Pollution Control, Department of Engineering, under the direction of the City Engineer. /secs. I. A. /1/ and I. A. /2/ /.

IV. Applicability

A. Sources

1. The bituminous stoker regulations list the permissible standards for the following categories:

/a/ Minimum combustion space for coal-burning. /sec. XIII. B/.

/b/ Minimum clear heights for underfeed stokers. /sec. XIII. C/.

/c/ Permissible sizes of bituminous stokers for steam and hot water heating systems based on net load and boiler rating. /sec. XIII. E/.

/d/ Permissible sizes of bituminous stokers for warm air heating systems. /sec. XIII. F/.

/e/ Dead plate type stokers having a burning rate of 100 pounds of coal per hour or over shall not be installed without some approved method for eliminating off-period smoke. All stokers over 200 pounds shall be so equipped. /sec. XIII. G/.

/f/ Vertical boilers, water tube boilers, portable boilers, contractor's equipment and incinerators cannot be installed unless only law volatile fuel /23 percent or less volatile content/ is used or unless such devices are equipped with mechanical fuel-burning devices especially designed for smokeless combustion of high volatile fuel. /sec. XIII. H 1/.

/g/ Combustion arches. /sec. XIII. H 3/.

/h/ Bituminous stokers installed in commercial or industrial buildings including apartments housing three or more families shall be equipped with a control by means of which fire may be maintained in the fuel bed of the stoker for extended idle periods and which will automatically start up at a predetermined time. /sec. XIII. I/.

/i/ Bituminous stokers must conform to the regulations standard for:

/1/ ledge distance

/2/ chimney size

/3/ fly ash collectors

/4/ ventilation

/5/ cleanout doors

/6/ fuel recommendations

/sec. XIII. I/.

2. The oil burner regulations set forth requirements in the following categories:

a. Definitions of technical terms and the ratings to be used. /sec. XIV. A/.

b. Sizing of burners. /sec. XIV. B/.

c. Design of primary combustion chamber. /sec. XIV. C/.

d. Combustion volume. /sec. XIV. D/.

e. Boiler and furnace burner units plans and specifications approval. /sec. XIV. E/.

f. Draft requirements. /sec. XIV. F/.

g. Special smoke inhibiting equipment requirements for vertical, water tube, and portable boilers, and contractor's equipment and incinerators. /sec. XIV. G/.

3. Over-fire air regulations list standards for:

a. Number and size of jets. /sec. XV. A/.

b. Spacing of jets. /sec. XV. B/.

c. Height of jets above tuyeres. /sec. XV. C/.

d. Port openings. /sec. XV. D/.

e. Duct work. /sec. XV. E/.

f. Capacity of fan and blower. /sec. XV. F/.

4. Persons operating steam railroads or locomotives shall use a solid fuel with 23 percent or less volatile content, or oil or diesel, or electric engines, or locomotives equipped with mechanical fuel-burning devices when the locomotive is in or being prepared for service in transfer, yard, or switching operations. This does not apply to road engines which are serviced in roundhouses or fire building stations so equipped as to enable them to comply with other provisions of these Rules and Regulations regarding the emission of dense smoke. /sec. VIII/.

B. Specific Pollutants

1. Smoke

The emission of smoke of a density equal to or greater than No. 2 Ringelmann from the stack of any premises, fuel-burning equipment, portable equipment, or similar contrivance, or open fire, except for nine minutes or less of a density equal to No. 2, or six minutes or less of a density in excess of No. 2 in any one hour at a time when the firebox is being cleaned out or a new fire is being built therein, or smoke equal to or greater than No. 2 from the stack of a locomotive for a period in excess of one continuous minute, and, in any event, not in excess of one minute in any 15 minutes after said locomotive is in or ready for service is prohibited. /sec. II/.

2. Soot, cinders, noxious gases, fly ash, and fumes

a. No person shall cause or allow to escape from any smoke stack or chimney, fuel-burning equipment, portable equipment, open fire, or internal combustion engine, in such quantities of soot, cinders, noxious acids, fumes or gases as to be detrimental to any person or the public, or to cause or have a tendency to cause injury or damage to property or business for air aggregate of six minutes or more in any one hour, or from a locomotive stack or from any boat for longer than one continuous minute or one minute in any 15 minutes. /sec. III/.

b. No person shall operate or cause to be operated, maintain or cause to be maintained, any boiler, furnace, or combustion device for the burning of coal, wholly or partly in suspension without maintaining and operating while using said device, recognized and approved means to reduce the quantity of fly ash emitted into the open air and which is operated in conjuction with said device to reduce the quantity of fly ash emitted into the open air so that it does not exceed 0.85 pounds per 1,000 pounds of gases, adjusted to 12 percent CO2 content, except that in no case shall more than 15 percent of fly ash measured before entering collection device be emitted from the stack or discharge. /sec. III/.

c. Fuel Standard

1. It is unlawful to expose for sale, exchange, or deliver for use and consumption any coal in sizes which will pass through a two-inch circular opening, or its equivalent, which contains in excess of 12 percent ash or two percent sulphur on a moisture free basis, unless such coal has been cleaned by washing so that it contains no more than 12 percent ash on a moisture free basis; and such coal can only be used or consumed in approved mechanical fuel-burning device; provided the provisions of this section shall not apply to any coal with a volatile content of less than 23 percent and an ash content of not more than 12 percent on a moisture free basis. The term "washing" means purifying, cleaning, or removing impurities by mechanical processes of removing refuse from coal, regardless of cleaning medium used. It is further provided that this section shall not apply to fuel containing volatile matter in excess of 23 percent and 12 percent ash on a moisture free basis if it meets the same standards in regard to smoke production as that of a fuel containing less than 23 percent

volatile matter and 12 percent ash on a moisture free basis, and subject to the following conditions to ascertain whether or not such standards are met.

a. Complete plans and specifications of such process must be submitted to the City Engineer as well as such other information as he may reasonably require.

b. A supply of the finished product must be made available to the City Engineer to make such tests as he deems necessary to establish its value as a smokeless solid fuel.

c. Any person whose product is submitted must pay in advance all expenses necessary to the attendant tests. /sec. IV/.

2. It is unlawful to use or consume solid fuel not excluded in 1. above in hand-fired or surface-burning types of equipment. /sec. IV/.

3. It is unlawful for any fuel dealer to sell or deliver for use in the city solid fuel with a volatile content of more than 23 percent to any person not having a permit from the City Engineer to burn such fuel. Notwithstanding this prohibition, the City Engineer is authorized upon application, therefor, to permit the sale of such coal for use in hand-fired equipment which has as automatic smoke abatement device using preheated overfire air for the purpose of permitting full and complete tests of any such device to determine whether by use thereof the provisions in regard to the emission of smoke can be complied with. Such permission shall be limited to six installations to be selected as representative of the various sizes and types of usage of the equipment. Such permit shall allow the sale of such quantities of such coal necessary to proper operation of the equipment for a period or periods not in excess of one month, aggregating not in excess of one year and such permit shall be revocable at any time. /sec. IV and IV-A/.

4. Any person who now uses or intends to use solid fuel which is included under the provisions of IV. C. 1. above, shall register his fuel-burning equipment with the City Engineer. If the equipment is of the mechanical fuel-burning type, the City Engineer shall furnish such person with a non-transferable permit. Such permit does not relieve the user from any responsibility for the emission of smoke in violation of these Rules and Regulations. /sec. IV/.

V. Enforcement

A. Interference

It shall be unlawful for any person to refuse to comply with, or to assist in the violation of, any provisions of these Rules and Regulations, or who interferes or attempts to interfere with the City Engineer or his authorized representatives, or police officers in the performance of any duty herein enjoined, or to refuse entrance to such officers to any premises at reasonable hours in premises the provisions of these Rules and Regulations are being violated, or refuse to permit inspections for the purpose of enforcement of these Rules and Regulations. /sec. XI/.

B. Procedure

After any owner, agent, occupant, manager or lessee of any premises has been previously notified of three or more violations of these Rules and Regulations within any consecutive 12-month period in respect to the emission of dense smoke, soot, cinders, fly ash, or noxious acids, fumes or gases, the owner or agent of said premises shall be notified to show cause at a hearing before the city on a day certain, not more than ten days from the date of notice, why the violations continue, and what remedial measures have been taken. If no remedial steps have been taken within ten days of the hearing, the City Engineer shall institute court proceedings against the violation to invoke penalties for all violations. If, after a permit has been issued for the work necessary to eliminate prohibited emissions and it becomes evident that the work is not progressing to the satisfaction of the City Engineer, it shall be the duty of the City Engineer to institute court proceedings. The City Engineer has the right to institute court proceedings for any single violation. /sec. X/.

C. Penalties

Any person violating these Rules and Regulations shall, upon conviction thereof, be guilty of a misdemeanor and shall be liable to a fine of not more than $100 or imprisonment for not more than 30 days, or both. Violations on any one day shall be considered one violation. /sec. XII/.

IV. Preventive Programs

A. Solid Fuel Dealer Registration

Before engaging in the business of selling solid fuel other than anthracite coal or coke direct to the consumer within the city, the dealer shall register with the City Engineer. /sec. V/.

B. Equipment Dealer Registration

No person shall produce, install, erect, reconstruct, repair, import or sell for use in the City any fuel-burning equipment other than that burning anthracite coal, coke or natural and manufactured gas unless he has first registered such intent with the City Engineer. /sec. VI/.

C. Installation Permits

No fuel-burning equipment, refuse-burning equipment or any chimney or furnace connected thereto, except equipment which burns anthracite coal, coke or natural or manufactured gas, shall be installed, reconstructed or altered until plans and specifications have been filed with and approved by the City Engineer as conforming to these Rules and Regulations. Repairs which do not alter the method of combustion or the emission of air polluting material can be made without a permit. Emergency alterations of equipment may be made without a permit, but plans and specifications of such alteration must be filed on the first business day thereafter, and a permit therefor must be obtained. Plans and specifications shall show the type of installation, the amount of work and heating to be done, provisions made to secure complete combustion of the fuel or refuse to be used and the manner in which it is to be burned for the purpose of preventing air pollution, rate of burning, the kind of fuel or refuse to be used. The plans and specifications shall also show that the room in which burning plants are to be located is provided with means of ventilation so that the air therein will be changed every ten minutes, and shall show the dimensions of such room, and the location and dimensions of all chimneys and smoke-stacks used in connection with the burning plant. /sec. VII/.

D. Fees

A fee of $1.00 shall be charged for the inspection of plans, issuing of permits and for inspection of furnaces or other fuel-burning apparatus. /sec. IX/.

TONAWANDA, N. Y.

I. Ordinance

9 June 1950, amended 1 July 1958.

II. General Statement

An ordinance to control smoke and air pollution by establishing standards of permissible smoke, dust and fly ash emission, requiring installation permits, operating certificates, and annual inspections, and providing for nuisance abatement and the imposition of penalties. Among the persons subject to its provisions are government corporations, departments, bureaus and agencies.

III. Administrative Organization

A. Smoke Inspector, whose general powers and duties include:

1. complaint investigations, smoke observation, steps proper to nuisance abatement, and enforcement of this ordinance

2. issuance of permits, certificates and notices

3. examination of plans and specifications

4. inspections. /sec. 5/.

B. Advisory Board of 5 members appointed by the Common Council to advise and counsel the Smoke Inspector and assist in promulgating rules and regulations. /sec. 6/.

IV. Applicability

A. Sources

1. Steam shovels and cranes using boilers shall use only smokeless type /bituminous/ or anthracite coal, coke, oil, gas or other smokeless fuel. /sec. 14/.

2. Fuel-burning equipment to heat buildings used exclusively for private residences of less than 5 dwelling units shall be equipped with efficient smoke eliminating apparatus unless fueled with anthracite coal, coke, oil, gas or other smokeless fuel. /sec. 13/.

3. Fuel or refuse-burning plants, excepting those in residences of less than 5 dwelling units and those whose equipment is fueled by gas or oil, and excepting

railroad locomotives and wrecking cranes, shall be provided with means whereby the fireman can observe smoke emission from the top of the stack without leaving the boiler room, such as:

/a/ An opening providing an unobstructed view

/b/ A mirror reflecting the top of the stack into the boiler room

/c/ A smoke indicator accurately showing the volume and character of the smoke being discharged.

B. Specific Pollutants

1. Smoke of a density equal to or greater than No. 3 Ringelmann is prohibited and declared to be a nuisance.

Permitted exceptions:

/a/ During unavoidable breakdowns, smoke of No. 3 Ringelmann for one period of not more than six minutes during any one hour.

/b/ When a firebox is being cleaned out or a new fire being built therein, "dense smoke" for one period of not more than ten minutes, or two periods of not more than six minutes, in any one calendar day.

/c/ Railroad locomotives may not emit smoke greater than No. 2 Ringelmann for more than one minute at any one time or for more than ten such one-minute periods in any consecutive period of sixty minutes, except:

/1/ during unavoidable breakdowns, smoke of a greater density shall be permitted for one period of not more than five minutes during any one hour.

/2/ when a firebox is being cleaned out or a new fire built therein, smoke of a greater density shall be permitted for one period of not more than ten minutes, or two periods of not more than six minutes, in any one calendar day. /sec. 3/.

2. Dust, soot, cinders, fly ash, noxious or obnoxious acid, vapor, fume or gas emission in such quantity as to cause injury or detriment to persons or to the public, or to endanger the reasonable comfort, health or safety of any person or to the public, or to cause unreasonable injury or damage to business or property is prohibited and declared to be a nuisance.

The quantity of dust and/or fly ash emission shall be limited to 0.75 grains per cu. ft. of flue gas at stack temperature of which amount not more than 0.2 grains per cu. ft. shall be of such a size as to be retained on a 300 mesh U.S. Standard Sieve. Measurements to be in accordance with the A.S.M.E. Test Code, when the percentage of excess air in the stack does not exceed 50 percent at full load. /sec. 4/.

V. Enforcement

A. Nuisance abatement /secs. 3, 4/.

B. Unlawful conduct - to obstruct or interfere with the enforcement of this ordinance. /sec. 16/.

C. Inspection - every fuel or refuse-burning plant, equipment or device shall be subject to annual inspection and may not be operated without an annual certificate of operation. Railroad locomotives and wrecking cranes are excepted. /sec. 10/.

D. Penalties /sec. 17/.

1. A violation of this ordinance is a misdemeanor, on conviction of which in a court of competent jurisdiction, a person may be fined not more than $100, or imprisoned for not more than 30 days, or both.

2. The Common Council may, in addition, maintain an action in a court of competent jurisdiction to collect a civil penalty of not more than $200 for each violation.

3. "Each unlawful emission of dense smoke, dust, soot, cinders, fly ash, noxious or obnoxious acids, fumes or gases shall constitute a separate violation."

VI. Preventive Programs

A. Permits /sec. 7/.

1. Required for installation, erection, alteration, addition to and use of fuel or refuse-burning plants, equipment or devices, except railroad locomotives, wrecking cranes and heating plants for residences of less than 5 dwelling units.

2. Plans and specifications therefor shall be submitted to the Smoke Inspector, signed by a licensed professional engineer, and showing:

/a/ the type of installation

/b/ the nature and extent of the work

/c/ the extent of the space to be heated

/d/ the kind of fuel or refuse to be used, its rate and manner of burning, and the provisions made for its complete combustion

/e/ the location and dimensions of the premises in which it is to be housed; ventilation thereof shall be sufficient to prevent the temperature from rising above 120 degrees F and to provide a change of atmosphere at least every ten minutes

/f/ the location and dimensions of all stacks to be used in connection therewith.

3. Nothing in this section shall be construed to prohibit the making of repairs.

B. Building Permits /sec. 8/.

Shall not be issued by the Building Inspector for any structure containing equipment covered by sec. 7 /A above/ unless that section shall be conformed with. The Smoke Inspector has the duty of inspecting the premises to see that such conformity prevails.

C. Certificate of Operation /sec. 9/.

Required for the use of any fuel or refuse-burning plant, equipment or device, except railroad locomotives and wrecking cranes.

D. Certificate of Extension /sec. 11/.

May be granted for not more than six months and further extended for not more than three months when necessary steps have been taken for compliance herewith, but proper equipment or devices cannot be obtained immediately.

WHITE PLAINS, N. Y.

I. Ordinance

Ordinance adopted November 17, 1947; amended May 4, 1959.

II. General Statement

An ordinance prohibiting the emission of dense smoke, soot, cinders, noxious acids, fumes and gases, and establishing penalties for its violation.

III. Administrative Organization

Commissioner of Building or such other person as he may designate shall have the duty of enforcing all the provisions of this ordinance. /sec. 6/.

IV. Applicability

A. Sources - any whatsoever.

B. Specific Pollutants:

1. Smoke - the emission of any smoke of a density equal to or greater than No. 2 Ringelmann shall be unlawful and is declared to be a nuisance /sec 2/, except:

   When a fire box, furnace, boiler, locomotive or other fuel consuming device is being cleaned out and a new fire is being built therein, a density greater than No. 2 Ringelmann shall be permitted for a period not to exceed 6 minutes in any single period of 60 minutes. /sec. 3/.

2. Soot, cinders, noxious acids, fumes and gases shall not be permitted to escape in such quantities as to be detrimental to any person or to the public or to flora and fauna, or to endanger the health, comfort and safety of any such person or of the public, or in such manner as to cause or have a tendency to cause injury or damage to property or business. The escape of such matter is declared to be a public nuisance. /sec. 5/.

V. Enforcement

A. Nuisances

As defined above, may be summarily abated by the

Commissioner or anyone whom he may designate for such purpose. /secs. 3, 5/.

B. Unlawful Conduct

Impeding the performance of duty of the Commissioner, his employees and representatives. /sec. 7/.

C. Penalties

Fine not to exceed $50, or imprisonment not to exceed 50 days, or both. Offenses on separate days shall be deemed to be separate offenses. /sec. 8/.

ASHEVILLE, N. C.

I. Ordinances and Regulations

Ordinance No. 310, October 31, 1946, as amended by Ordinance No. 337, June 16, 1950, and Ordinance No. 417, November 5, 1959. Rules and Regulations, May 15, 1954.

II. General Statement

This Ordinance provides for Department of Smoke Regulation; requires and provides for installation permits and operating permits; requires reports of sales of fuel-burning equipment; prohibits certain emissions; and provides for penalties for violations and for appeals to the Appeal Board. Person is defined to include any government corporation, department, bureau, agency or any other entity recognized by law as the subject of rights and duties.

The Rules and Regulations set out a policy under which the Smoke Abatement Department and the standards to which the enumerated equipment must conform.

III. Administrative Organization

A. Department of Smoke Regulation composed of the Advisory Board, Chief Smoke Regulation Engineer and an Appeal Board.

B. Advisory Board, appointed by City Council, shall advise the Chief Smoke Regulation Engineer, and approve or veto rules and regulations proposed by the Chief Smoke Regulation Engineer. /sec. 3/.

C. Chief Smoke Regulation Engineer shall enforce this Ordinance, issue permits, make inspections, and publish and disseminate information on smoke reduction. /sec. 3/.

D. Appeal Board shall hear exceptions taken to any decision, ruling, regulation, or order by the Chief Smoke Regulation Engineer. /sec. 12/.

IV. Applicability

A. Sources

1. The Rules and Regulations promulgated pursuant to this Ordinance set out a policy under which the Smoke Abatement Department operates. In cases of new fuel-burning equipment replacing old equipment in existing buildings it will be the prerogative of the Chief Smoke Regulation Engineer to make exceptions as he finds acceptable to the office. If at any time the Rules and Regulations

are found oppressive or inadequate, upon proper presentation, the Chief Smoke Regulation Engineer will open discussion with those persons involved. The Rules and Regulations set out the specifications to which the following equipment must comply:

/1/ Chimneys and stacks /sec. II/.

/2/ Flue pipe or breaching /sec. III/.

/3/ Boilers /sec. IV/.

/4/ Warm air furnaces /sec. V/.

/5/ Warm air heating systems for multiple dwellings /sec. V-VI/.

/6/ Stokers /sec. VI/.

/7/ Stoker minimum setting heights /sec. VI-V/.

/8/ Stoker settings /sec. VI-VI/.

/9/ Draft Controls /sec. VI-VII/.

/10/ Oil Burners /sec. VII/.

/11/ Pot type boilers /sec. VII-VII/.

/12/ Oil Storage tanks /sec. VII/.

/13/ Gas fired equipment /sec. IX/.

/14/ Gas fired units under 400,000 BTU per hour /sec. X/.

/15/ Conversion burners /sec. XI/.

/16/ Burner installation /sec. XII/.

/17/ Unit heaters /sec. XIII/.

/18/ Floor furnaces /sec. XIV/.

/19/ Ventilation - air for combustion /sec. XV/.

/20/ Chimneys - flues - vents /sec. XVI/.

/21/ Draft hoods /secs. XVI-XV/ & /Table No. 1/.

/22/ Gas piping /sec. XVII/.

/23/ Controls /sec. XVIII/.

/24/ Operating instructions /sec. XIX/.

/25/ Requirements for installation of gas-burning equipment larger than 400,000 BTU per hour input /sec. XX/.

/26/ Installation of burner and controls /sec. XXI/.

/27/ Semi-rigid tubing and fittings /sec. XXII/.

/28/ Gas piping /sec. XXIII/.

/29/ Instructions to the operator /sec. XXIV/.

2. All newly constructed or reconstructed fuel-burning plants with more than 500 sq. ft. of boiler heating surface or its equivalent, shall be equipped with smoke indicators, mirrors, or similar devices, to enable the firemen to observe the top of his stack from the boiler room at all times, unless the top of the stack is readily visible from the boiler room without the use of such devices. In plants where a fireman is not in constant attendance in the boiler room, the smoke indicator shall be of a type which will sound an alarm, or flash a signal, to attract the attention of the firemen. Any existing plant which emits smoke in violation of this Ordinance may be required to install such indicating devices. /sec. 10/.

B. Specific Pollutants

1. Emission of smoke from any fuel-burning equipment, premises, open fire or stack, excepting locomotives and vehicles shall not be equal to or greater than No. 2 Ringelmann for a period aggregating four minutes or more in any thirty minutes, except smoke the shade or density of which is equal to No. 2 and not greater than No. 3 Ringelmann may be emitted for a period or periods aggregating three minutes in any fifteen minutes when building a new fire, cleaning a fire, or when breakdown of equipment occurs and the emission was not reasonably presentable. /secs. 9 /b/ and 9 /c/ /.

2. The emission of smoke from any locomotive or vehicle shall not be equal to or greater than No. 2 Ringelmann for a period or periods aggregating more than one minute in any fifteen minutes, except smoke the shade or density of which is equal to No. 2 and not greater than No. 3 Ringelmann may be emitted for a period or periods aggregating three minutes in any fifteen

minutes when building a new fire, when cleaning fires or when the breakdown of equipment occurs which make the emission not reasonably preventable. /sec. 9 /d/ /.

3. The emission of dust from any fuel-burning equipment shall not exceed .85 pounds per 1,000 lbs. of gases, adjusted to 12 percent carbon dioxide content. /sec. 9 /e/ /.

4. Emission of smoke, dust or fumes from any equipment, premises, open fire or stack which is detrimental to the health, welfare or property of others is prohibited. /sec. 9 /f/ /.

V. Enforcement

A. Nuisance

Emission of smoke in violation of this Ordinance is declared to be a public nuisance and may be summarily abated by the Chief Smoke Regulation Engineer. /sec. 13 /c/ /.

B. Sealing

After any person has been previously notified of three or more violations of this Ordinance with respect to smoke emission within any consecutive twelve month period, that person shall be notified to show cause before the Chief Smoke Regulation Engineer on a specified date not less than ten days from the date of notice, why the equipment causing such violations should not be sealed. If the Chief Smoke Regulation Engineer finds, upon such hearing, that adequate corrective means and methods have not been employed to correct the condition, then it shall be his duty to seal the equipment until a new installation permit or operating certificate has been applied for and issued. An appeal from this order may, within ten days, be made to the Appeal Board, and such appeal shall act as a stay of decision by the Chief Smoke Regulation Engineer pending the decision of the Appeal Board and action of City Council. /sec. 9/.

C. Inspections

Inspection of fuel-burning equipment under the jurisdiction of this Ordinance may be made at any time to see that such equipment and plant can be operated within the provisions of this Ordinance. Upon notice that the equipment has been found to comply with the provisions of the Ordinance, and after payment of the prescribed fee, the Chief Smoke Regulation Engineer shall issue a certificate of operation which shall be posted in a conspicuous place within the plant. If such inspection reveals that the equipment is in such condition that it cannot be operated within the provisions of the Ordinance, the Chief Smoke Regulation Engineer shall give notice in writing to the person responsible for such equipment of the defects found in an order to correct, repair, or replace the defective equipment, and it then becomes incumbent upon the owner or operator to comply with such orders within thirty days. Upon violation of this order the Chief Smoke Regulation Engineer is authorized to seal the equipment. /sec. 6/.

D. Unlawful Acts

No person shall in any manner hinder, prevent or interfere or attempt to interfere with the Chief Smoke Regulation Engineer or any of the personnel of his department in the performance of any duty herein enjoined or refuse to permit inspections or entrance to the premises at reasonable hours. /sec. 11/.

E. Procedure

Anyone taking exception to any decision, ruling, regulation, or order of the Chief Smoke Regulation Engineer may appeal the question to the Appeal Board within ten days after the Chief Smoke Regulation Engineer has performed the complaint of act. The Appeal Board shall set a date from five to ten days from the date of filing of the appeal for hearing. Such an appeal acts as a stay of the decision, ruling, regulation or order in question until the final decision of the issue is rendered. The appellant shall file a deposit of $10.00 for costs of the hearing. The Board shall, within a period of ten days after the hearing, affirm, modify or set aside the decision, ruling, regulation or order of the Chief Smoke Regulation Engineer. The Appeal Board shall report its findings to the City Council, which shall make such disposition of the matter as it deems fit. The decision of the City Council in any such case shall be final. If the decision of the Chief Smoke Regulation Engineer is reversed by the Appeal Board and such decision is upheld by the City Council, the cost of the hearing shall be borne by the City and the bond or deposit refunded. /sec. 12/.

F. Penalties

Prosecutions under this Ordinance shall be instituted by the Chief Smoke Regulation Engineer in the name of the City. Upon conviction of a violation of any provision of this Ordinance, shall be guilty of a misdemeanor, and shall be fined not exceeding $50.00 or imprisonment not exceeding thirty days. /sec. 14/.

VI. Preventive Programs

A. Permits

No person shall construct, install or alter any fuel-burning equipment until an application, including plans and specifications of such equipment and structures to be used in connection therewith, has been filed in duplicate with the Chief Smoke Regulation Engineer, and an installation permit has been issued by him for such construction, installation or alteration. Repairs or minor alterations which do not change the capacity of the equipment or the method of combustion or adversely affect the emission of smoke, dust or fumes therefrom, may be made without an installation permit, and in addition, any emergency repairs may be made prior to the application for, and the issuance of, a required installation permit if serious consequences would result if the repairs were to be deferred. When emergency repairs are made, application for the installation permit therefor shall be filed in duplicate by the person with the Chief Smoke Regulation Engineer on the first business day following the starting of such work. Violation of the installation permit is sufficient cause for the Chief Smoke Regulation Engineer to stop all work, and he is hereby authorized to seal the installation, and further work shall not proceed until the Chief Smoke Regulation Engineer is assured that the violation in question will be corrected and that the work will proceed in accordance with the installation permit. If construction, installation or alteration is not started within one year of the date of the installation permit, the permit shall become void and all fees paid shall be forfeited. The Chief Smoke Regulation Engineer is authorized to seal the equipment in operation upon which an operating permit has not been obtained as required in this Ordinance. The issuance of an installation permit shall not be held to exempt the person to whom the permit has been issued from prosecution for the emission of smoke, dust and fumes prohibited by this Ordinance. /sec. 5/.

B. Fees, Permit and inspection fees are based on BTU per hour input. /sec. 7/.

C. The Chief Smoke Regulation Engineer shall:

1. Publish and disseminate information on methods of smoke reduction.

2. Enlist the cooperation of civic, technical, scientific and educational societies. /sec. 3/.

CHARLOTTE, N. C.

I. Ordinance

Ordinance No. 323, now City Code Article VI, Sec. 10-102; April 25, 1956.

II. General Statement

An ordinance to regulate and control the emission of dense smoke, soot, cinders, fly ash, acid or other fumes, dirt or other material or noxious gases by establishing permissible standards, and to control certain combustion equipment by means of permits and inspections.

III. Administrative Organization

A. Department of Air Pollution Control, headed by the Air Pollution Control Director appointed by the City Manager and whose duties include:

1. Supervision, execution and enforcement of the laws, ordinances and regulations pertaining hereto
2. Issuance of notices provided for herein
3. Investigating complaints, and making inspections and observations of smoke conditions /sec.380,382/.

B. Air Pollution Control Advisory and Appeal Board of 5 members appointed by the City Council whose duties shall be:

1. To act as advisor on air pollution matters to the City Council, the City Manager, and the Director.
2. To review written appeals from any decision of the Director. On all appeals taken to the Board, or appealed from the Board to City Council, appropriate hearings shall be held after due notice to the parties concerned. /sec. 383/.

IV. Applicability

A. Sources

1. Fuel burning equipment shall be installed, erected, constructed, reconstructed, altered or repaired in compliance with the pertinent rules, regulations, instructions, recommendations and boiler ratings contained in: /sec. 387/

/a/ American Society of Heating and Air Conditioning Engineers "Guide", 1956.

/b/ Heating, Piping and Air Conditioning Contractors National Association "Net Load Recommendations for Heating Boilers", 1955.

/c/ Institute of Boiler and Radiator Manufacturers "I-B-R Ratings for Boilers", 1955.

/d/ National Board of Fire Underwriters "Gas and Oil Equipment List", November - 1954.

/e/ Steel Boiler Institute "S-B-I Boiler Rating Code 6th Edition", July - 1954.

/f/ Stoker Manufacturers Association "Technical Manual", 1947.

2. All new installations of boilers, furnaces or fuel-burning equipment for the burning of solid fuel, fully or partially in suspension including all types of overfeed stokers, shall be equipped with an approved and effective fly ash collector. /sec. 394/.

3. All new and/or existing incinerators, cupolas and smelters and all other fuel-burning equipment not otherwise specifically covered shall be judged upon their merits by the Director and where he finds it necessary for compliance with this Ordinance such equipment shall be required to be equipped with gas washing devices, settling chambers, electric or gas igniters, gas or oil secondary heat, fume and odor destructors, fly ash collectors, or other approved devices. /sec. 395/.

4. Any fuel-burning equipment installed, altered, rebuilt, or reconstructed having or requiring an input of 400,000 BTU's or more per hour, shall be an approved smokeless type or shall be equipped with mechanical methods of firing coal, oil, or gas, except that a permit may be issued for the use of coke only, in which event no other fuel may be used in such plants. A permit may be issued for only one such boiler in any one plant. /sec. 396/.

5. Open fires may not be used to burn old rubber, automobile batteries, leather, waste oils and grease, garbage, junk automobiles or similar items, cloth, materials, plastics or leaves or trimmings or scrap building material or any refuse, except that this shall not apply to burning leaves, grass, weeds, wood,

paper and such in residential sections on one's own premises, provided such burning is not within 50 feet of any building, is attended by some person over the age of 18 years, and is completely extinguished at the end of such burning, provided also such burning shall not be done in a manner to cause nuisance, annoyance, detriment or discomfort to persons, or damage to business or property. /sec. 399/.

6. Outdoor fireplaces designed for cooking shall not be used as incinerators in such manner as to cause nuisance, annoyance, detriment, or discomfort to persons or to cause the emission of smoke, fumes, fly ash, dust or soot prohibited by this Ordinance. /sec. 400/.

B. Specific Pollutants:

1. Smoke of a density equal to or greater than No. 2 Ringelmann shall not be permitted to escape through a stack, flue, or chimney, but during the time when a firebox is being cleaned or a new fire is being built, an immunity for a period or periods aggregating 6 minutes in any 60 minute period shall be allowed. The emission of No. 4 smoke shall be considered a violation at any time. /sec. 384/.

2. Dust in the gases or air shall not exceed 0.85 lbs. per 1000 lbs. of the gases adjusted to 50 percent excess air, in discharges from any fuel-burning equipment or premises, any industrial process, manufacturing operation, material handling, or any other source, except that for fuel-burning equipment or premises constructed prior to this ordinance, a dust collecting efficiency of not more than 75 percent shall be required for special dust collecting equipment. /sec. 388/.

3. Cinders, dust, fly ash, soot, acid, or other fumes, dirt, or other materials, or noxious gases shall not be allowed into the open air in such quantity, place or manner as to cause injury, detriment, nuisance or annoyance to any person or damage to any property. /sec. 397/.

V. Enforcement

A. Abatement

The Director or any one duly authorized by him shall abate any smoke emissions prohibited by III. B. 1 above.

B. Unlawful Conduct

1. To interfere with the Director or his agents in the performance of their duties is unlawful and a misdemeanor. /sec. 385/.

2. To violate any duly sealed equipment without written authorization from the Director or a court of competent jurisdiction is unlawful and a misdemeanor. /sec. 393/.

3. The emission of cinders, etc., prohibited by III. B. 3 above is a misdemeanor. /sec. 397/.

C. Sealing

After giving written notification of 3 or more violations within a 12 month period, the Director may require the person in charge of the offending equipment to show cause before him, not less than 10 days from notice thereof, why the equipment should not be sealed. The alleged violator may then appear and be heard. Any decision of the Director may be appealed to the Board within 10 days, and the appeal shall stay the sealing order. /sec. 392/.

D. Penalties

"... this Ordinance is passed under the police powers given to the City of Charlotte for sanitary purposes and for the protection of property in the City ..." /sec. 2/.

E. Procedure

See Sealing - V. C above, and III. B. 2 for appeals.

VI. Preventive Programs

A. Installation Permits /sec. 389/.

1. Required for the construction, installation, reconstruction, alteration or repair of any heating or combustion equipment employing solid fuel or commercial oil, known as Bunker C or No. 5 or No. 6 oil having a fuel input of 400,000 BTU's per hour.

2. Plans and specifications shall accompany the application which shall show that adequate and approved provisions have been made for the purpose of preventing and eliminating air pollutants.

3. Upon approval by the Director and payment of fees, a permit shall be issued.

4. Before issuing a building permit, the Building Inspector shall require the Director's written approval of all plans and specifications of all equipment to be installed in the building, for which a permit is required herein.

B. Certificate of Operation

Shall be required for all equipment covered by VI. A above, and shall be issued by the Director after inspection of the work discloses its conformity with the requirements of this ordinance, and with the approved plans and specifications and the information given on the application. /sec. 390/.

WINSTON-SALEM, N. C.

I. Ordinance

Chapter 29 of the General Ordinances, June 9, 1949, with Rules and Regulations.

II. General Statement

An ordinance to regulate the emission of smoke and the pollution of the air, by prescribing standards of emission and regulating fuel-burning installations, requiring installation permits and operating certificates, and establishing penalties for violations. Definition of person includes departments, bureaus, and agencies.

III. Administrative Organization

A. Director of Smoke and Air Pollution Control, to be appointed by the City Manager, whose duties shall include:

1. Administration of his department and enforcement of the rules and regulations issued thereunder.
2. Investigation of complaints, observation of smoke and air pollution conditions, institution of action necessary to abate nuisance.
3. Issuance of permits, certificates, and notices.
4. Examination of plans for new buildings and alteration of old buildings involving installation of plant or fuel-burning equipment.
5. Examination of plans for construction, installation, or alteration of any equipment which might cause air pollution.
6. Inspection of all equipment for which permits have been issued, and all equipment under the jurisdiction of this Ordinance at reasonable intervals.
7. Publication and dissemination of information on methods of air pollution reduction.
8. Enlistment of cooperation of civic, technical, scientific and educational societies.
9. Monthly report of his work, and that done under his direction, to the City Manager. /sec. I/.

B. Air Pollution Board of Control and Appeals, of 5 members, appointed by the Board of Aldermen, whose duties shall include:

1. Acting as an advisory board on technical matters to the Director.

2. Considering and recommending for final approval by the Board of Aldermen such rules and regulations as may be proposed by the Director. /sec. II/. No such rule or regulation shall be adopted unless a public hearing thereon has been held. Notice thereof shall be published in a daily newspaper at least 10 days prior to the hearing, together with a statement that the proposed rule or regulation is available at the office of the Director. If approved by the Board, notice shall be given to the Board of Aldermen. Upon its approval, such rule or regulation shall become official. /sec. III 3/.

3. Hearing any person who may desire to appeal from any decision of the Director. /sec. II/.

IV. Applicability

A. Sources

1. All fuel-burning equipment shall be erected, constructed, altered, installed, equipped, maintained, and fired with fuel in such manner that it can be operated without violating the emission standards set forth below. /Rule I/.

2. All chimneys, flues and stacks which emit sparks shall be capped with spark arrestor screens of approved design. /Rule I/.

3. All new installations of pulverized fuel-burning equipment, spreader stokers or any similar suspension-burning types shall be provided with dust-separating equipment. /Rule II/.

4. No tar kettles or asphalt kettles shall be used with an open fire. All tar kettles and asphalt kettles shall burn coke or shall be equipped with oil burners approved by the Director. /Rule II/.

5. No person tearing down or wrecking any building or structure shall burn tar paper, refuse, or rubbish in any open fire at the site. No person shall burn any garbage, refuse, or rubbish in an open fire except at a place and in such manner as is approved by the Director.

/Rule II/.

6. All existing portable boilers /except locomotives or locomotive cranes/ shall use only coke, gas, oil or anthracite coal as fuel. If gas or oil is used, the type of burner shall be approved by the Director. /Rule II/.

7. Railroad Roundhouses, Locomotives, and other vehicles:

/a/ All railroad roundhouses or fire-building stations hereafter constructed, where steam is raised in locomotives without the production of smoke of a shade or density greater than No. 3 Ringelmann for a period of not more than 6 minutes in one hour. All locomotives stationed at such locations shall be equipped with approved devices by means of which fires may be cleaned; fires may be built; and steam raised in cold locomotives without the production of smoke of that shade or density for a period of not more than 6 minutes in one hour. It shall be unlawful for any other vehicle to emit smoke of the shade or density greater than No. 3 Ringelmann for more than 6 minutes in 1 hour when a fire is being built or cleaned. /Rule III.1/. Exception: when a breakdown of equipment makes it evident that the emission was not reasonably preventable.

/b/ It shall be unlawful for a locomotive or other vehicle to emit smoke of a density greater than No. 2 Ringelmann for more than one minute in any 15 minute period, except when a fire is being cleaned or built as provided above.

/c/ Director may require any vehicle used permanently or temporarily in the city to be equipped with approved devices for smoke elimination if it violates /a/ above. /Rule III/.

8. Boilers shall be installed in accordance with the Boiler Code of the A.S.M.E., or Net Load Recommendations of the Heating, Piping and Air Conditioning Contractors National Association, or the Testing and Heating Code for Low Pressure Boilers of the Institute of Boiler and Radiator Manufacturers, or the North Carolina Boiler Inspection Law and Rules. Clearances around boilers and furnaces shall conform to requirements of the National Board of Fire Underwriters. /Rule IV/.

9. Stokers shall be installed in accordance with the recommendations of the "Technical Manual" of the Stoker Manufacturers' Association and the American Boiler and Affiliated Industries.

/a/ Adequate firing tools shall be provided with each installation. Stokers with less than 75 lbs. capacity shall be provided with clinker-tongs and poker or slice bar; larger ones will be provided with a substantial slice bar and hoe or rake.

/b/ On all stoker fired heating, and small power boiler plants, a hold-fire timer device shall be required which shall provide short periods of stoker operation at sufficiently frequent intervals to maintain a fire and in no case at greater than one hour intervals when the normal operating control is satisfied or inoperative.

/c/ Over fire air, mechanically supplied or produced by steam jets at sufficient pressure to penetrate and create turbulence within one foot of all furnace walls must be provided for all stoker fired boilers having a 500 or more lbs. per hr. stoker firing rate. Over fire air may be required on any installation with a lower firing rate if individual conditions necessitate. /Rule V/.

10. Oil and Gas Burners.

/a/ Oil burning equipment shall be installed in compliance with the regulations of the National Board of Fire Underwriters and all applicable City Ordinances.

/b/ Gas burners shall bear the seal of approval of the American Gas Association, and shall be installed in compliance with American Standard requirements and in compliance with the regulations of the National Board of Fire Underwriters and applicable City Ordinances. Fuel-burning unit heaters shall not be used for heating residences. /Rule VI/.

11. Stacks and Chimneys.

/a/ Shall be built in accordance with the "Technical Manual" of the Stoker Manufacturers' Association. Manufacturer's rating may be used when available.

/b/ Shall be of such cross-sectional area and height that under all conditions of operation the draft in any part of the furnace will not be less than .10 inch water gauge for boilers fired with stoker using forced draft, powdered fuel, gas or oil, or .25 inch gauge for stoker fired boilers using natural draft.

/c/ Inside walls shall be smoketight, vertical, free from offsets or obstruction, and have a cleanout opening with a tightly-fitted door.

/d/ Shall extend sufficiently above the roof of the building of which it is a part, and shall extend above or be far enough away from any nearby building or other object to prevent down drafts or the creation of a nuisance by the discharge of smoke or the gases of combustion.

/e/ If it is or becomes a nuisance to occupants of its own or adjacent buildings, it shall be increased in height or otherwise made to conform to the requirements of the Director. If it may constitute a nuisance to a proposed new building, the owner of the new building shall extend it or make other provisions required by the Director.

/f/ Boilers of furnaces located in separate rooms or buildings shall have separate stacks or separate flue linings in one stack.

/g/ A new combustion device may be connected in an existing flue smaller than the dimensions prescribed in /a/ above provided it will not cause a smoke nuisance or create a fire hazard.

/h/ Two or more smoke pipes may be connected to a single existing flue connection provided the pipes and flue are of sufficient size to serve all the appliances thus connected, and provided that, except for vent pipes for gas appliances, the several pipes shall be so constructed as to comply with the severest requirements of any of those so connected. Only automatic gas appliances may be ventilated to a flue, serving appliances using another fuel; and in such case the gas appliance connection must be made at a point at least 12 inches above the connection for such other appliance.

/i/ The breechings of smoke connections from boiler to chimney, or from the boiler nearest the chimney, shall have an area at least 20 percent greater than that at the top of a round chimney, or of a circle inscribed in the required area at the top of a square, hexagonal or octagonal chimney, and 20 percent larger than that of an ellipse inscribed in the required area of a rectangular chimney.

/j/ Chimneys or stacks may be built of iron or steel, fabricated according to standard engineering practice. All metal stacks shall be safely guyed or shall be otherwise securely anchored. Where the temperature of such chimneys exceeds 750 degrees F., they shall be lined with fire brick laid in fire clay. They shall rest on a foundation of not less than two-hour fire resistive construction except when supported on the boiler setting.

/k/ All boiler rooms or other rooms in which combustion devices are located shall have adequate openings to admit sufficient fresh air for proper combustion. The area of such openings shall be not less than 75 percent of the required chimney area. These openings may be omitted when adequate fresh air for proper combustion is supplied by other approved means. /Rule VII/.

12. Smoke indicators or alarms may be required where as many as 3 smoke violations within 30 days have occurred. /Rule VIII/.

13. All furnaces or combustion devices for the burning of fuel, fully or partly in suspension, shall be equipped with an approved fly-ash collector when found necessary, and in all cases must be equipped with an automatic damper control of a dependable make which will keep the over-draft constant to within 0.02-inch of water gauge of the required setting. /Rule IX/.

14. Heating stoves and cooking stoves used in private residences are exempt from permits and from these rules and regulations, except when they violate emission standards /below/.

No new boilers above 1,000 sq. ft. of net steam rating shall be handfired. /Rule X/.

B. Specific Pollutants

1. Smoke of a density equal to but not greater than No. 2 Ringelmann shall not be discharged from any fuel-burning equipment, internal combustion engine, premises or open fire /excepting railroad locomotives or vehicles/ for a period aggregating 4 minutes or more in any 30 minutes, or of a density equal to but not greater than No. 3 Ringelmann for a period aggregating 3 minutes in any 15 minutes when building a new fire or cleaning a fire. Exception: when breakdown of equipment makes it evident that the emission was not reasonably preventable. /Rule II 1/.

2. Dust in the gases shall not be discharged from any fuel-burning equipment or premises in excess of 0.425 grains per cu. ft. of flue gases at 500 degees F. corrected to 50 percent excess air in the stack, except that in no case shall more than 15 percent of the total

dust measured before entering the collection device be emitted from the stack. /Rule II 3/. These standards apply also to discharges from industrial processes, manufacturing operations, material handling or any other sources /Rule II 4/. Measurement shall be according to the A.S.M.E. Test Code. /Rule II 5/.

3. Fumes or soot that are a detriment to the property of others or a nuisance to any person shall not be discharged from any fuel-burning equipment, internal combustion engine, railroad locomotive, vehicle, premises, open fire or stack; provided, that if in the opinion of the Director all practical precautions and remedies have been taken to reduce or eliminate such objectionable emissions; he shall present his findings to the Control Board which may approve and permit the operations. /Rule II 7/.

V. Enforcement

A. Unlawful Conduct

1. To interfere with the Director or any of his personnel in the performance of duty, or refuse them entrance to premises at reasonable hours. /sec. III 9/.

2. To violate the seal on any equipment sealed by the Director without his written authorization to do so. /sec. III 10/.

B. Sealing

1. After previous notification of two violations within a 12-month period, a person shall be notified to show cause before the Board, on a date not less than 10 days later, why the offending equipment should not be sealed. The person may appear and be heard. If the Board finds that adequate corrective measures have not been taken, the Director is authorized to seal the equipment until an installation permit and an operating permit have been obtained for it. /sec. III 11/.

2. Violation of an installation permit shall be sufficient cause for the Director to seal the installation. /sec. III 5/.

3. Use or operation of any new or altered equipment for which an installation permit was required before an operating permit has been issued therefor shall be grounds for the Director to seal the equipment. /sec. III 6/.

C. Procedure

1. Appeals may be taken from any decision of the Director by filing with him, within 10 days, a written notice of appeal directed to the Board and specifying the grounds thereof and the relief sought. The appeal shall stay the decision complained of.

2. A hearing at which the appellant may appear personally or by agent or attorney shall be held not less than 5 nor more than 10 days after the filing of the appeal.

3. The Board shall render its final decision within 10 days of the hearing. /sec. III 2/.

D. Penalties

Any person convicted of violating any provision hereof shall be liable to a fine of not less than $10 nor more than $100 upon the first offense, and in the event of a second offense, a fine of not less than $50 nor more than $500. Each day's violation shall constitute a separate offense. /sec. III 14/.

VI. Preventive Programs

A. Installation permits

1. Required for the construction, installation or alteration of any equipment capable of emitting dusts, gases, fumes, mists, vapors, smokes and odors into the open air.

2. To be issued on the Director's approval of applications including plans and specifications.

3. Exemptions.

/a/ Minor alterations which do not change the effective character of the equipment.

/b/ Equipment of a temporary and experimental character.

/c/ All parts of secret processes not directly related to the emission of the enumerated pollutants. /sec. III 4/.

B. Operating permits

Required for the use of any equipment for which an installation permit was required or issued. /sec. III 6/.

VII. Miscellaneous

Permits for the erection, construction or alteration of any building, plant or structure containing fuel-burning equipment subject to this Ordinance shall be issued by any City Department unless the Director has issued a permit for the equipment or approved the plans. The owner may, in lieu of this provision, file an affidavit with the Director certifying that the equipment shall be used exclusively for the combustion of anthracite coal or coke. /sec. III 7/.

CINCINNATI, OHIO

I. Ordinance

Chapter 15 of the Building Code of the City of Cincinnati, revised June, 1957.

II. General Statement

Provisions of the Building Code establishing standards for the emission of smoke and particulate matter, requiring the use of smokeless solid fuels, prescribing equipment standards, requiring licenses for fuel dealers, permits, inspections, and operating certificates, and establishing penalties for violations.

III. Administrative Organization

A. Bureau of Air Pollution and Heating Inspection within the Department of Safety to be administered by the Air Pollution Control and Heating Engineer /Art. IV, sec. 28/. He shall be appointed by the City Manager /sec. 2502-15/ and his duties shall be /sec. 2502-16/---

1. To supervise the execution of laws and ordinances pertaining to smoke abatement and fuel-burning equipment

2. To establish standards, rules and regulations

3. To compel the prevention and abatement of smoke and noxious gases and nuisances arising therefrom

4. To examine and approve plans of heating, power and fuel-burning installations.

B. Air Pollution Appeal Board, of 7 members, to hear and decide appeals from decisions of the Air Pollution Control and Heating Engineer. /sec. 2502-13/.

IV. Applicability

A. Sources

1. Equipment

/a/ Approved equipment for providing furnace turbulence may be required in any boiler or furnace where such equipment is necessary for the reduction of smoke or fly ash. /sec. 2501-7/.

/b/ All small boilers less than 1000 square feet of heating surface and warm air furnaces using solid fuels and connected to chimneys without an approved fly-ash arrestor in the base of the stack, shall be equipped with fly-ash settling chambers or fly-ash traps of a design approved by the Air Pollution Control and Heating Engineer. /sec. 2513-1/.

/c/ No boiler of less than 1000 sq. ft. of heating surface shall be fired with pulverized fuel or any firing device burning solid fuel in suspension or part suspension unless the unit is equipped with fly-ash eliminating equipment to the full satisfaction of the Air Pollution Control and Heating Engineer. /sec. 2513-7/.

/d/ All new stoker installations shall have gradual acting air control on starting or they shall be equipped with fly-ash eliminating equipment. All old installations shall be equipped with gradual acting air control or fly-ash eliminating equipment. /sec. 2513-8/.

/e/ Boilers of self-contained firebox type, where water legs of the boiler form at least 80 percent of the side and rear walls, shall have such furnace volume that the heat release under any condition of operation shall not exceed 40,000 B.T.U. per cubic feet per hour. Where such boilers are operated in excess of 150 percent of rating, or where the fuel burning rate exceeds 5 1/2 pounds of coal per 10 square feet of heating surface, or where the stokers under such boilers are not equipped with gradual acting control, giving at least 6 steps in coal feed and air supply, there must be introduced between the smoke connection and the chimney, an approved fly-ash trap which will limit the discharge of solids in the combustion gases to the requirements of this Code. /sec. 2514-5/.

/f/ Any installation of pulverized fuel fired boilers, or boilers equipped with spreader types of stoker or burning fuel in suspension regardless of furnace volume or furnace construction, shall be equipped with special fly-ash arresting equipment of mechanical, electrical or washing types, the effectiveness of which has been demonstrated to the satisfaction of the Air Pollution Control and Heating Engineer and which will keep the solids discharged in the combustion gases within the requirements of this Code. /sec. 2514-6/.

/g/ The design, construction, use and maintenance of chimneys shall be in accordance with the provisions of this Code. Chimney as herein used includes all stacks or flues intended or required for the purpose of removing products of combustion from any fuel. Building plans shall show complete details of chimneys to serve all combustion equipment that may discharge waste gases, vapors or odors into the atmosphere. All building plans shall be accompanied by specifications which will provide the construction details of chimneys with a description of the equipment they are to serve. All buildings shall be provided with approved masonry chimneys, metal chimneys, or Type B Gas Vents as required by this Code when equipment installed or to be installed requires venting to chimneys or Type B Gas Vents. /sec. 2519/.

/h/ Where mechanical draft is utilized and the cross sectional area of the chimney and/or the cleanout area is reduced below the requirements for natural draft chimneys, special fly-ash eliminating equipment approved by the Air Pollution Control and Heating Engineer will be required. Height of the chimney may be less than required for natural draft installations provided, however, that special consideration must be given to the terminal point of the chimney as required. /sec. 2519-34/.

/i/ All solid or liquid fuel-burning plants having more than 500 square feet of boiler heating surface /50 H.P./ or its equivalent shall be equipped with smoke indicators, mirrors or other devices, approved by the Air Pollution Control and Heating Engineer to enable the fireman to observe smoke conditions from the firing floor of the boiler room at all times, unless the top of the stack is readily visible to the fireman from the boiler room. /sec. 2520/.

/j/ Incinerator includes any combustion device or contrivance for the reduction of garbage, refuse, or other waste material. It shall be unlawful for any person to permit or cause foul or offensive odors, fumes, gases, fly-ash or smoke in the maintenance or operation of an incinerator.

/1/ Detailed plans and specifications for incinerator construction shall be submitted to the Air Pollution Control and Heating Engineer for approval and a separate permit shall be obtained before starting work on an incinerator.

/2/ No other combustion device shall be connected to an incinerator flue, except for existing buildings as provided.

/3/ Cleanout chamber or the chamber at the bottom of any new or existing chimney shall not be used as an incinerator for the burning of refuse or other waste materials. /sec. 2521/.

2. Steam Railroads & Locomotives

/a/ All steam railroads and locomotives shall be operated with a smokeless fuel, or oil, or Diesel, or electric engines, or locomotives equipped with mechanical fuel-burning equipment, or locomotives equipped with a device which automatically prevents emission of smoke of unlawful density; and all yard and regularly assigned transfer steam locomotives shall be equipped with an automatic device for the prevention of smoke emission of an unlawful density. /sec. 2502-1/.

/b/ All railroad roundhouses or fire building stations hereafter constructed where steam is raised in locomotives shall be equipped with direct steaming systems and such other approved devices by means of which fires may be built and steam raised in cold locomotives without the production of dense smoke for a period of more than 3 minutes duration. All locomotives stationed at such location shall be equipped with approved devices by means of which fires may be built and steam raised in cold locomotives without the production of dense smoke for a period of more than 3 minutes duration.

All steam driven locomotives shall use a fuel that will not cause unlawful smoke, or shall be equipped with other devices adequate to abate smoke. /sec. 2534/.

/c/ Lawful density may be exceeded once only for a continuous period of not more than 6 minutes for cleaning, withdrawing, or extinguishing the fire in a locomotive of a roundhouse, terminal or fire-cleaning station in any period of operation, i.e., not less than 8 hours between successive departures from its roundhouse or terminal.

One allowance, not to exceed 6 continuous minutes, shall be made for building a fresh fire in any locomotive having a cold firebox in any period of operation.

In operating service, allowance shall be made for any period of dense smoke emission of not more than 1 minute per hour in the aggregate. /sec. 2501-4/.

3. Miscellaneous

/a/ River Boats - steam powered boats shall be equipped with devices to abate smoke approved by the Air Pollution Control and Heating Engineer, except

/1/ boats within the city limits for the sole purpose of securing supplies or repairs, provided they leave immediately after the completion of their purpose, or the cessation of unsafe navigation conditions, and

/2/ boats which have made not more than 6 scheduled calls at the port within the preceding 12 months. /sec. 2535/.

/b/ Tar and ashphalt kettles with more than 5 gallon capacity shall not be used over an open fire. Tar shall be drawn from kettles through cocks, not dipped, and no fuel shall be used for the heating of either type of kettle which will produce dense smoke. /sec. 2536/.

B. Specific Pollutants

1. Smoke

The following color scale of measurement is adopted for the purpose of determining smoke densities: one thickness of gray glass of 40 percent opacity, designated as No. 1 scale, is the basis; two thicknesses of said glass are No. 2 scale; three thicknesses are No. 3 scale; and four thicknesses are No. 4 scale. /sec. 2501-2/.

/a/ Smoke of greater density than No. 4 scale is dense smoke and is declared to be a nuisance, except that in the operation of stationary equipment one allowance shall be made in each operating period per unit of equipment in use, for one and only one continuous period of dense smoke emission as follows:

/1/ Hand-fired, solid-fuel-burning equipment provided with grates and natural draft:

6 minutes in any 24 hrs. for starting or lighting a wholly fresh fuel bed.

6 minutes in each 8 hrs. for cleaning accumulated ashes from the grates

6 minutes in each 8 hrs. for removing soot or dust from flue gas passages if the equipment operates continuously

6 minutes in each 24 hrs. for removing soot or dust from flue gas passages if the equipment is not in operation continuously.

/2/ Underfeed, mechanically-fired, solid-fuel-burning equipment with forced draft:

6 minutes in each 8 hrs. for cleaning accumulated ashes from stationary dead plates

6 minutes in each 8 hrs. if operated continuously, and

6 minutes in each 24 hrs. if not operated continuously, for removing soot or dust from flue gas passages.

/3/ Overfeed, mechanically-fired, solid-fuel-burning equipment in which the fuel is partially burned in suspension and partially on stationary, shaking or moving grates, with forced-draft:

6 minutes in each 24 hrs. for starting or lighting wholly fresh fuel bed

6 minutes in each 8 hrs. for cleaning accumulated ashes from stationary grates only

6 minutes in each 8 hrs. if operated continuously, and

6 minutes in each 24 hrs. if not operated continuously, for removing soot or dust from flue gas passages.

/4/ Mechanical pulverized-solid-fuel-burning equipment in which the fuel is burned wholly in suspension in forced-draft, and having dry bottom or slag-top bottom furnace construction:

6 minutes in each 8 hrs. if operated continuously, and

6 minutes in each 24 hrs. if not operated continuously, for removing soot or dust from flue gas passages.

/5/ Municipal garbage and refuse destructors requiring the use of solid fuel for preheating and starting:

15 minutes in each 24 hrs. for starting or lighting a wholly fresh fuel bed.

/6/ Gas producers using volatile solid fuel:

15 minutes in not less than 7 days for starting

15 seconds in not less than 15 minutes for "blowing" the produced or reversing air and gas valves where

regenerative heat exchangers are used. /secs. 2501-3, 2501-4/.

2. Particulate matter

Not to exceed a concentration of 0.85 lbs. per 1000 lbs. of gases, adjusted to 50 percent excess air admitted for combustion, except that never more than 15 percent of the total entering the separating equipment shall be emitted from the stack. This standard shall apply to acid or other fumes, noxious gases, strong odors, dust, dirt, or other solids from any stack or chimney, window, door, or other opening, ventilating device, building, premises, or other source. /secs. 2501-3, 2501-5/.

C. Volatility

1. Smokeless solid fuel is fuel with a volatile content of not more than 26 percent on a dry basis, correct within 2 percent, or a processed fuel of more than 26 percent volatility on a dry basis which meets the smoke production standards of the less volatile fuel as determined by the following procedure:

/a/ submission to the Air Pollution Control and Heating Engineer of complete plans and specifications of the process

/b/ submission of an adequate supply of the finished product for such tests as are deemed necessary by the Air Pollution and Heating Control Engineer for the establishment of its value as a smokeless fuel

/c/ payment in advance of the costs of such tests by the person whose product is being tested.

2. The use of any other solid fuel for hand-fired equipment is prohibited unless the Air Pollution and Heating Engineer has determined after testing that it will burn any solid fuel of any volatility without emitting smoke of greater density than No. 2 scale. Any such approved equipment shall be issued and shall display a Smokeless Equipment Certificate, and the maximum rated output in B.T.U. per hour shall be plainly marked on the device. /secs. 2501-6, 2502/.

V. Enforcement

A. Inspections, Sealing, Certificates

1. An annual inspection of all solid or liquid fuel-burning equipment shall be made, whether or not a previous

operating permit or certificate has been issued, excepting, however, residence buildings having no central heating equipment and furnaces or other fuel-burning equipment in residence buildings of less than 4 dwelling units.

2. If the equipment is approved after inspection, a certificate of operation shall be issued and posted after payment of required fees.

3. If, on any inspection, the equipment is found to be defective, written notice shall be given to correct the deficiencies within 30 days, or be subject to the sealing of the equipment.

4. Each day's failure to comply after the 30 days shall be a separate offense. /sec. 2502-19/.

5. If the equipment is sealed, the seal shall not be broken except on written order of the Engineer, under penalty of conviction for a misdemeanor. Each day an unlawfully broken seal so remains shall constitute a separate offense. /sec. 2502-19a/.

6. After any person has received notice of three or more violations within 12 consecutive months, he shall be notified to show cause, within 10 days, why the offending equipment should not be sealed. If, upon the hearing, the equipment is found not to be in conformity with the ordinance, it shall be sealed until installation and operating permits have been issued for it. /sec. 2502-21/.

7. Any certificate issued by the Commissioner of Buildings or the Air Pollution Control and Heating Engineer shall be subject to revocation for any violation of its terms or those of this Code. /sec. 1149/.

8. Failure to comply with orders of the Commissioner of Buildings within the time specified for compliance shall be a misdemeanor. /sec. 1150-3/.

B. Period of Grace

The Air Pollution Control and Heating Engineer may, in his discretion, grant immunity from prosecution for the unlawful emission of smoke when occasioned by unavoidable failure or breakdown of equipment, but not more than 3 times in any 12-month period for any one piece of equipment. /sec. 2501-4/.

C. Procedure

1. Citation

/a/ A citation tag shall be given to each person violating a provision of this ordinance for the purpose of giving him notice of the violation and directing him to the proper authorities. /sec. 2502-11/.

/b/ Any person receiving such tag may, by presenting it to the Clerk of the Municipal Court of Cincinnati, file a written plea of guilty and pay a $10 fine and $2 to cover costs. The court may accept or reject such plea. /sec. 2502-12/.

2. Appeals

Appeals from decisions, rulings, or orders of the Air Pollution Control and Heating Engineer shall be taken to the Appeals Board within 10 days by filing a notice of appeal specifying the grounds thereof and the relief prayed for. The Engineer shall transmit to the Board all pertinent records. The Board shall fix a reasonable time for the hearing and give due notice thereof to all interested parties. Filing of an appeal shall stay the order complained of until a final decision is reached. The appellant shall deposit a fee of $5 on filing the appeal, and may appear at the hearing in person or by agent or attorney. If his contention is sustained, the $5 deposit shall be returned. /sec. 2502-14/.

D. Penalties

1. When work for which a permit is required is begun prior to the issuance of the permit, the specified fee shall be doubled, except where such fees exceed $100, that part in excess of $100 shall not be doubled. /sec. 1130/.

2. Any person who violates a provision of this Code or fails to obey an order issued thereunder shall be guilty of a misdemeanor and subject to a fine of not less than $5 nor more than $500. Each day's violation after notice thereof shall be a separate offense. /sec. 1152a/.

3. Any architect, engineer, contractor, builder, subcontractor, foreman, mechanic, employee, or other person who assists in the violation of this Code shall be guilty of a misdemeanor punishable by a

fine of not less than $5 nor more than $500. /sec. 1152b/.

VI. Preventive Programs

A. Permits

1. Required for construction, reconstruction, or alteration of furnaces, boiler-furnaces, chimneys, or stacks; and the installation or alteration of prefabricated fuel-burning equipment.

2. Applications shall contain plans and specifications regarding the type of installation, amount of work and of heating to be done by the equipment, and all provisions made for the prevention of smoke and the elimination of fly-ash. They shall also indicate the amount and kind of fuel to be used, and that the room, construction, materials, chimneys, equipment and other appurtenances do not violate smoke control requirements.

3. All applications shall be passed upon within 10 days of filing and the payment of the required fees.

4. When the Air Pollution Control and Heating Engineer has issued a permit, it shall be the duty of the Division of Buildings to cooperate with him in seeing that the approved work is completed in accordance with the standards of the Building Code.

5. Violation of a permit shall be grounds for stop-work and sealing orders, and each day of violation shall constitute a separate offense. /sec. 2502-18/.

6. The Commissioner of Buildings or the Air Pollution Control and Heating Engineer shall inspect all work for which a permit has been issued, and it shall be unlawful to use the equipment until it shall have been found to conform to the provisions of this Code. /sec. 1142/.

B. Testing

1. The Air Pollution Control and Heating Engineer shall test each new type of fuel-burning equipment /that which changes the manner of combustion/, and in no case shall a piece of mechanical fuel-burning equipment be installed unless approved by the Engineer. /sec. 2501-6/.

2. All flues shall be subject to a smoke test before approval, not to be made until the mortar has been

thoroughly seasoned. By building a smudge fire at the bottom of the flue and closing it tightly at the top while smoke is flowing therefrom, the contractor can determine from the escape of smoke into other flues or through chimney walls whether openings must be made tight before approval. The test shall be made before the Commissioner of Buildings and the Air Pollution Control and Heating Engineer or their agents, before the scaffolding is removed. /sec. 2519-24/.

C. Licensing

1. All persons selling solid fuels to ultimate consumers must be licensed.

2. License applications shall set forth the nature and location of the business, and names of persons responsible.

3. The Air Pollution Control and Heating Engineer shall notify the applicant, the City Treasurer, and the Superintendent of Weights and Measures of his approval or disapproval of license applications.

4. If no protest against the issuance of a license is lodged within 10 days of the Air Pollution Control and Heating Engineer's approval, the City Treasurer shall issue the license upon payment of the prescribed fee.

5. Any changes in the nature, location, or responsible personnel of the licensee's business shall be reported in writing to the Air Pollution Control and Heating Engineer.

6. The license shall be subject to revocation if the licensee is thrice convicted of violating City Ordinances relating to:

/a/ the use and consumption of solid fuel

/b/ inspection and regulation of solid fuel handling

/c/ inspection or sale of solid fuel

/d/ misrepresentations of the size, weight, grade, quality, method of preparing solid fuel sold or to be sold.

7. All sales, conveyances, and deliveries of solid fuels must be accompanied by the conveyance to the driver of the carrier containing the solid fuel a delivery

ticket as required by sec. 710-2 of the City Code. Furthermore, each delivery ticket shall contain information regarding the maximum volatile content by weight on a dry basis, correct within 2 percent, and the trade name under which the fuel is sold. All solid fuel bills shall have plainly indicated thereon the maximum volatile content on a dry basis correct within 2 percent. These requirements for delivery tickets and bills shall not apply to sales in loads of less than 1 ton. /secs. 2502-2 to 2502-10/.

8. In the event that the City Manager shall find that normal channels of trade will not be adequate to supply smokeless fuel at acceptable prices, he shall so report to the Council which may declare an emergency period during which solid fuel other than that specified herein may be used. /sec. 2502/.

D. Public Information

The Air Pollution Control and Heating Engineer shall publish a list of brands or trade names of smokeless solid fuels as defined under this Code, together with an analysis of each fuel as to volatile content, ash content and source, and shall compile and publish from time to time statistics with reference to the supply, prevailing prices and other pertinent facts for the guidance of the public. /sec. 2502b/.

CLEVELAND, OHIO

I. Ordinance

Air Pollution Code, Ordinance No. 428-A-62, Sections 4.0101 through 4.1906 of the City Code, /June 18, 1962/.

II. General Statement

Ordinance lists prohibited emissions, provides for installation permits, periodic inspections, and sealing of non-conforming equipment, and sets forth the penalties for violations and the procedure by which appeals can be made. "Air Pollution" is defined as the escape into the atmosphere of aerosols, dust, fumes, gas, ionizing radiation, mist, odor, smoke, vapor or any combination thereof.

III. Administrative Organization

A. Division of Air and Stream Pollution headed by the Commissioner of Air and Stream Pollution is charged with the enforcement of the Ordinance.

B. Director of Urban Renewal and Housing is authorized to adopt rules and regulations pursuant to the Ordinance. /sec. 4.1906/.

C. Commissioner of Building has the responsibility for issuing installation permits. /sec. 4.0901/.

IV. Applicability

A. Sources

All combustion or other devices, except those specifically exempted under V-D and VII, hereafter erected, constructed, altered or installed must be capable of being operated without violating this Ordinance with respect to prohibited emissions. The person in charge of the following equipment, constructed prior to this Ordinance and not conforming to the prohibitions applicable to dust or fumes of a color other than black and metallurgical fumes or dust, shall submit within 18 months to the Commissioner of Air and Stream Pollution a program for ultimate conformance according to the following schedule:

Open-hearth furnace - December 31, 1972.

Sintering plant - December 31, 1967.

Electric furnace - December 31, 1967.

Bessemer Converter furnace - December 31, 1967.

Non-ferrous foundry and smelter - December 31, 1967.

Ferrous foundry - December 31, 1967.

The person in charge shall submit on or before January 1st of every year to the Commissioner of Air and Stream Pollution a report of the status of the program. Such person shall not be in violation of this Ordinance if said report shows progress to the satisfaction of the Commissioner. /secs. 4.0701, 4.0506/.

B. Specific Pollutants

1. Smoke - No person shall cause or allow smoke to be discharged from any stack or vent in excess of the following limitations. /sec. 4.0501/.

Ringelmann Chart No.	Railroads and Steamships	Other combustion devices except incinerators	Incinerators
1	No limitation	No limitation	No limitation
2	No limitation	10 minutes in any 1 hour	Not allowed
3	RR-1/2 minute in any 4 minutes SS- 6 minutes in any 1 hour	6 minutes in any 8 hour period	Not allowed
4 and 5	Not allowed	Not allowed	Not allowed

2. No person shall cause or allow the discharge from any stack or vent, dust or fumes of a color other than black of a density of greater than No. 2 Ringelmann. When the presence of uncombined water is the sole reason for failure to meet this limitation, the limitation shall not apply. /sec. 4.0502/.

3. Fly ash - No person shall cause or allow to be discharged from any incinerator stack or vent fly ash in excess of 0.20 pounds per 1,000 pounds of flue gas, or from any stack or vent serving any combustion device, other than an incinerator, fly ash in excess of 0.65 pounds per 1,000 pounds of flue gas adjusted to 50 percent excess air. /sec. 4.0503/.

The person in charge of any existing device not conforming to these limitations with respect to fly ash and not conforming to smoke limitations for incinerators shall submit for approval within a reasonable time a program for the ultimate conformance to this Ordinance. Conformance shall be completed within a period specified by the Commissioner not to exceed four years. /secs. 4.0503, 4.0504/.

4. No person shall cause to be emitted any metallurgical fumes or dust in excess of 0.20 pounds per 1,000 pounds of gas in the operation of any open hearth, sintering plant, electric furnace, basic oxygen steel furnace, Bessemer Converter Furnace, and non-ferrous foundry and smelter, and in excess of 0.50 pounds per 1,000 pounds of gas in the operation of any ferrous foundry. /sec. 4.0505/.

5. No person shall cause the burning of paper, wood or combustible refuse, waste material, motor vehicle or any parts thereof in an open fire, or any other device or manner not approved by the Division of Air and Stream Pollution. /sec. 4.0509/.

V. Enforcement

A. No person shall cause or allow the emission of poisonous, obnoxious, pungent or ill-smelling gases, fumes or other air pollution from any source so as to cause a nuisance or cause or allow the handling, conveying, storing or accumulation of any coal, ashes, cinders, building material, dust, refuse, or other material in such manner that dust or other emanations may escape and become a nuisance. Such nuisance, in either case, may be summarily abated by the Commissioner of Air and Stream Pollution. Such abatement is in addition to penalties hereinafter provided. /secs. 4.0507, 4.0508/.

B. Sealing - The Chief of the Bureau concerned, upon order of the Commissioner of Air and Stream Pollution, may seal or order the discontinuance of use of any device whenever:

/1/ An abatement order is not complied with within ten days after service, except that in cases of emergency an abatement order shall be preceded by a notice.

/2/ In the case of movable equipment other than locomotives or steamboats, immediate correction of a violation is not made when so ordered by the Chief.

/3/ Operation of the device is deemed hazardous to person and property by the Chief of the Bureau concerned. In an emergency, the device may be sealed without notice; otherwise notice shall be given with a set time limit for compliance, and upon non-compliance therewith, sealing may be ordered.

/4/ Any device is being operated without an unexpired Certificate of Operation. No person shall break any seal or operate or cause to be operated any device properly sealed unless authorized by the Chief of the Bureau concerned. /secs. 4.1501 - 4.1503/.

C. Inspections - Commissioner of Air and Stream Pollution shall inspect every device except locomotives and floating equipment at least once every 12 months. When such device is and can be operated within this Code a certificate of operation shall be issued. If it is found that the equipment is violating or can not be operated without violating this Code a notice for the abatement of violations and correction of conditions within a set time limit shall be issued. Upon non-compliance with the notice the Commissioner may order immediate compliance and revoke any certificate of operation. No device shall be operated without a certificate of operation. /secs. 4.1101 - 4.1103/.

D. Variances - This Code shall not apply to:

1. Any combustion device in a single- or two-family dwelling not used for a commercial purpose or which has not more than one retail establishment therein which is a secondary or incidental function of the building or such device serving not more than two dwelling units.

2. Any warm air furnace, unit heater or ceiling type unit heater, except that if operation of such equipment violates this Code and a complaint is received the Bureau of Smoke Abatement will make recommendations to eliminate the violations.

3. Boilers which do not exceed: 16 inches inside diameter of shell, 42 inches over-all length of outside to outside heads at center, 20 square feet water heating surface, 100 pounds per square inch gauge maximum allowable working pressure. /secs. 4.1302, 4.1303/.

E. Procedure

Appeals from any order, requirement, decision or determination of any administrative officer or agency relating to location, design, materials, construction, alteration or repair, use, maintenance, removal or demolition of any device regulated by this Code or the Building Code shall be heard and decided by the Board of Building Standards and Building Appeals. /sec. 4.1905/.

F. Penalties

The following violations are misdemeanors and are subject to the stated penalties.

1. Violation of any provision of the Code: first offense - fine of $25 to $200; second offense - fine of $50 to $500 or not more than 90 days imprisonment or both.
2. Breaking of a seal or unauthorized operation of a sealed device: first offense - fine of $25 to $200; second offense - fine of $50 to $500.
3. Denial of admittance during business hours of any enforcement officer or interference with such officer performing his duties: fine not to exceed $50. /secs. 4.1901 - 4.1904/.

VI. Preventive Programs

A. Permits - No person shall erect, construct, alter or install any combustion device or other device governed by this Code until the Commissioner of Building has issued a permit pursuant to an application accompanied by plans and specifications. The Commissioner of Air and Stream Pollution shall have the duty to approve such application as conforming to this Code or disapprove it upon non-conformance. If the installation is not begun within six months and completed within one year of the issuance of the permit, the permit shall be cancelled. The Commissioner of Building shall revoke any permit when the application contains false information or the construction is not in conformity with the permit. /secs. 4.0901 - 4.0904/.

VII. Miscellaneous

Fees are charged for the issuance of permits and annual certificates except that:

1. No fees shall be collected from governmental units which are prohibited by law.

2. No fees shall be charged for the inspection of devices installed or to be installed in any public or parochial school or any church. /secs. 4.1301, 4.1706/.

CLEVELAND HEIGHTS, OHIO

I. Ordinance

Codified Ordinances of Cleveland Heights, Part V, Chapter 3, August 1, 1955.

II. General Statement

An ordinance to control air pollution by prescribing permissible standards of emission, prohibiting open fires, requiring permits, operating certificates and inspections, and establishing penalties for violations.

III. Administrative Organization

A. Bureau of Smoke Abatement, headed by a Chief who shall:

1. Enforce all ordinances pertaining to smoke regulation and inaugurate prosecutions for violations.

2. Prepare and execute plans for enlisting public cooperation in reducing smoke emission.

3. Examine applications and plans, and inspect installations.

4. Prepare and promulgate rules and regulations which shall become effective 15 days after publication in a newspaper of general circulation in the City. /secs. 503.02, 503.03/.

IV. Applicability

A. Sources

1. Open Fires:

/a/ No person shall fire any combustible material or make a bonfire on any street, way or public ground without the prior permission of the City Manager or Chief of the Fire Department. /sec. 503.05/.

/b/ Tar, asphalt and similar materials shall not be melted by open fires. Tar and asphalt kettles shall be equipped with oil burners approved by the Bureau, or be coke-fired in an approved manner.

B. Specific Pollutants

1. Smoke Emission:

Ringelmann Chart No.	Permissible Smoke Emission
1	No limitation
2	10 minutes in any 1 hour
3	6 minutes in any 8 hour period
4	Not allowed
5	Not allowed

/sec. 503.04/.

/a/ All combustion devices must be so constructed, erected, altered, installed or equipped that they can be operated without violating the above standards. /sec. 503.06/.

/b/ Fuel-burning equipment shall be so equipped and maintained and fired with such fuel, that it can be operated without violating these standards. /sec. 503.06/.

NOTE - Specific exemptions: domestic equipment in dwelling houses or row houses, or serving only one dwelling unit, are exempted from conformity with emission control standards and from the requirements of operating certificates and annual inspections, but shall be required to have permits.

V. Enforcement

A. Sealing of Combustion Device may be ordered by the Chief upon order of the Director of Public Service when:

1. An order of abatement for violation is not complied with within 10 days, except in emergencies "an order requiring abatement of a violation shall be preceded by a notice."

2. In the case of movable equipment, an order requiring the operator to correct a condition is not immediately complied with.

3. Operation of a combustion device is deemed by the Chief to be hazardous to persons or property. Except in cases of emergency, such an order shall be preceded by written notice specifying the time for compliance.

4. Repairs or alterations to the device, deemed necessary by the Chief for its operation in conformity with the Ordinance, are not made within the specified time or the extended period granted by the Chief.

5. Required fees are not paid within 30 days of the annual inspection.

Any breaking of the seal without authorization by the Chief shall constitute a violation of the Ordinance. /sec. 503.09/.

B. Penalties

1. For violation of the provisions respecting open fires, on conviction of a misdemeanor, to be fined not in excess of $200. /sec. 503.05/.

2. For violation of any other provision of the Ordinance, on conviction of a misdemeanor, to be fined not in excess of $200 for the first offense, nor more than $500 for the second offense. Each day's violation shall constitute a separate offense. /sec. 503.99/.

3. For refusing admittance to a properly identified enforcement officer, or interference with the performance of his duties, on conviction of a misdemeanor, to be fined not in excess of $100. /sec. 503.99/.

VI. Preventive Programs

A. Permits

1. Required for any erection, construction, alteration or installation of a combustion device or part thereof.

2. Application, to be accompanied by plans and specifications to be submitted to the Building Commissioner, who shall refer it to the Chief of the Bureau of Smoke Abatement for approval.

3. Approval or disapproval to be returned to the Building Commissioner within 10 days. If approved, permit to be issued on payment of fees, /schedule included in Ordinance/.

4. Work for which permit is issued shall be begun within 6 months and completed within one year, unless time has been extended by the Building Commissioner. Without such extension, permit is automatically cancelled after 1 year.

5. All combustion devices for which permit has been issued are to be inspected by the Chief or his agent during and upon completion of the work permitted.

6. False statements or misrepresentation in applications, plans or specifications shall be cause for revocation of the permit, and any work not done in conformity with the permit shall be cause for a work stoppage on written notice from the Chief specifying the conditions on which work may be resumed. /sec. 503.07/.

B. Inspection and Certificate of Operation

All combustion equipment other than the enumerated exceptions shall be inspected at least once in each 36 month period to verify that its operation is in conformity with the provisions of this Ordinance. If so, a certificate of operation shall be issued upon payment of the scheduled fee, and shall be displayed on or adjacent to the unit of equipment to which it applies. Subsequent annual inspections and approvals shall be noted on the certificate by the Chief or his agent. /sec. 503.08/.

COLUMBUS, OHIO

I. Ordinance

Columbus City Code, Title 27, with Rules and Regulations published by the Department of Public Safety on October 7, 1957.

II. General Statement

An ordinance to regulate air pollution by prescribing emission standards, requiring installation permits, inspections, operating certificates and sales reports, and establishing penalties for violations.

III. Administrative Organization

A. Division of Smoke Regulation and Inspection to adopt a comprehensive and integrated plan of smoke control /sec. 2703.01/, and to be composed of a Chief Smoke Regulation Engineer, an Advisory Board, and an Appeal Board. /sec. 2703.03/.

1. Chief Smoke Regulation Engineer shall be appointed by the Director of the Department of Public Safety. He shall be responsible for the administration of the Division and the enforcement of this Title, with duties including: /sec. 2705.02/.

/a/ investigation of complaints, making of smoke observations.

/b/ issuing permits, certificates and notices.

/c/ examining building plans and applications.

/d/ inspection of equipment.

/e/ dissemination of information on methods of smoke reduction.

/f/ enlisting the cooperation of civic, technical, scientific and educational societies.

He may promulgate rules and regulations relating to the installation and operation of fuel-burning equipment and other devices the use of which may violate this Title, with the advice and approval of the Advisory Board and subject to its veto. Such regulations as may be revised, altered, amended or rescinded by him; with the advice and approval of the Advisory Board shall be effective 30 days after publication in the City Bulletin. /sec. 2705.03/.

2. Advisory Board of 5 members appointed by the Mayor to advise the Chief Smoke Regulation Engineer, approve or veto his rules and regulations, and advise the City Council and the Mayor with reference to problems of smoke regulation. /secs. 2707.01, 2707.02/.

3. Appeal Board of 5 members appointed by the Mayor to hear and decide appeals from decisions of the Chief Smoke Regulation Engineer. /sec. 2709.01/.

IV. Applicability

A. Sources

1. Stationary Plants

   The discharge of smoke equal to No. 2 Ringelmann shall not be permitted from any fuel-burning equipment, internal combustion engine, or open fire, excepting locomotives or vehicles, for a period aggregating 8 minutes or more in any 30 minutes. Smoke of a density greater than No. 2 Ringelmann may be discharged for periods aggregating 3 minutes in any 30 minutes for the following reasons only: when building a new fire, when cleaning a fire, or when an unpreventable emission is caused by a breakdown of equipment. /sec. 2711.01/.

2. Locomotives and Vehicles

   The discharge of smoke of a density equal to No. 2 Ringelmann shall not be permitted from locomotives or vehicles for a period aggregating 8 minutes or more in any 30 minutes. Smoke of a density greater than No. 2 Ringelmann may be discharged for 3 minutes in any 15 minutes for the following reasons only: when building a fire, when cleaning a fire, or when an unpreventable emission is caused by a breakdown of equipment. A locomotive, whether operating or standing, shall be allowed smoke greater than No. 2 Ringelmann for any reason other than the aforementioned for 1 minute in any 15 minute period. /sec. 2711.02/.

B. Specific Pollutants

1. Dust in excess of 0.85 percent lb. per 1000 lb. of gases, adjusted to twelve percent CO2 content for products of combustion shall not be discharged from any fuel-burning equipment. Measurement shall be according to the A.S.M.E. Test Code. /sec. 2711.03/.

2. Fumes that are a nuisance to any person or that are a detriment or injurious to the property of others shall not be discharged from any fuel-burning equipment, internal combustion engine, locomotive, vehicle, premises, open fire or stack. /sec. 2711.04/.

C. Rules and Regulations promulgated pursuant to the authority of this Ordinance deal with general rules, chimneys, flue pipes or breechings, boilers, warm air units, stokers, overfire air jets, oil burners, gas burners over 400,000 BTU, and other equipment not specifically provided for. The following have specific relevance to air pollution control:

1. A Smoke Indicator shall be installed on all fuel-burning equipment burning 225 lbs. coal per hour, 17 g.p.h. oil or greater, except equipment burning gas only. /Rules and Regulations, sec. 1.9/.

2. All chimneys shall extend a minimum of at least 4 ft. above any wall, coping, saw-tooth roof, penthouse, or obstacle on buildings where fuel-burning equipment is installed. Chimneys shall be high enough to allow sufficient clearance above adjacent buildings, natural obstacles, etc., to allow dispersion of exhaust gases and other emissions without causing a nuisance at varying levels occupied by individuals on property adjacent to such chimney. Height of stacks for equipment which discharges objectionable gases shall be given special consideration. /Rules and Regulations, sec. 2.6/.

3. Instructions furnished by the manufacturer to be individually and separately hung are to be furnished on each stoker installation as follows:

/a/ Instructions for the proper manner of starting a fire smokelessly within the limitations of the law.

/b/ Instructions for cleaning a fire smokelessly within the limitations of the law. /Rules and Regulations, sec. 6.15/.

4. Burner adjustment shall be such that smoke or soot shall not be discharged to the atmosphere. Adjustments shall be made in accordance with the manufacturer's instructions so that air-gas ratios are obtained that will complete the combustion in the space provided over the full operating range of the burner. /Rules and Regulations, sec. 9.74/.

5. The following equipment shall be installed in accordance

with the latest recognized best engineering practice. In addition the following requirements shall apply:

/a/ Spreader Stoker Installations

/1/ Special provisions shall be made to prevent smoke, particularly at a minimum load. Minimum load shall be stated, including summer and weekend loads. Turn down ratio shall be guaranteed in writing by stoker manufacturer.

/2/ Traveling grates or other types of grates which mechanically move and discharge ashes continuously shall be provided for all units of 1500 lbs./hr. or greater burning rate.

/3/ Fly ash collectors shall be installed.

/b/ Traveling Grate Stokers, Vibrating or Oscillating Grates

/1/ Fly ash collectors shall be installed unless test data is submitted which will satisfy the Smoke Regulation Engineer that fly ash emission will be within the limits of the Code.

/c/ Pulverized Fuel Installations and Cyclone Furnaces

/1/ Electrostatic precipitators shall be required.

/d/ Fly Ash Emission Tests

The necessary scaffolding and test openings shall be installed when any of the above equipment is initially installed if requested by the Smoke Regulation Engineer. /Rules and Regulations, sec. 11/.

6. Ferric metallurgical processes, non-ferric, glass plants, smoke houses, vegetable extraction processes, meat extraction processes, chemical process industries, sand, gravel, cement or earth processing or handling, blast cleaning of buildings, streets, bridges or other structures, dry material handling processes and others shall be required to meet rules and regulations determined by the Division of Smoke Regulation and Inspection which will prevent excessive emission of dust, fumes, smoke, odors and other forms of air pollution. Since these types of installations are not general, it will be necessary for those anticipating these types of installations to contact the Division for rules governing each installation. /Rules and Regulations, sec. 12/.

V. Enforcement

A. Nuisance

Emission from any source whatever, except as provided in IV A above, of smoke of a density equal to or greater than No. 2 Ringelmann is declared a public nuisance and may be summarily abated by the Chief Smoke Regulation Engineer or his designee. /sec. 2713.05/.

B. Unlawful Conduct

1. To interfere with the performance of duty by the Chief Smoke Regulation Engineer or the personnel of his division, or refuse them entrance to premises at reasonable hours. /sec. 2713.01/.

2. To violate the seal on any equipment sealed by the Chief Smoke Regulation Engineer without his written authorization to do so. /sec. 2713.04/.

3. To install or operate any fuel-burning equipment for which a permit is required without having first secured such permit. /sec. 2713.05/.

C. Inspections

An inspection of all fuel-burning equipment having a fuel input of 400,000 BTU per hour or greater or any size incinerators shall be made at least once in a period of 3 years except that such inspection shall not be required as to locomotives, equipment in private residences, equipment in one building containing four or fewer dwelling units, cooking stoves or ranges. /sec. 2721.08/.

D. Record Keeping

The sale or lease of every piece of fuel-burning equipment by retail dealers shall be reported to the Chief Smoke Regulation Engineer, in writing, within ten days of the transaction, together with a statement of the address of the building in which it is to be used or installed. Any false statement made in connection therewith shall be a violation of this chapter. /sec. 2713.02/.

E. Sealing

1. Any person previously notified of three or more violations of this chapter within a 12 month period may be notified to show cause before the Chief Smoke

Regulation Engineer why the offending equipment, excepting locomotives, should not be sealed. The hearing, at which the person so notified may appear and be heard, shall be held not less than 10 days from the date of notice. /sec. 2711.05/. If the Chief finds that adequate corrective measures have not been taken, he may seal the equipment and revoke all previously granted permits. /sec. 2711.06/. Appeals from his findings may be taken to the Appeal Board within 10 days, such appeal to stay the decision appealed from. /sec. 2711.07/.

2. If, at the time of any inspection, it is found that the equipment inspected cannot be operated within the provisions of this chapter, the Chief shall give notice to the person in charge, in writing, to correct the defects. Failure to do so within 30 days shall be a violation of this chapter, and the Chief is authorized to seal the equipment. /sec. 2721.10/.

F. Period of Grace

If it is shown that under the circumstances compliance with an order issued under E 2 above is not possible within 30 days, the Appeal Board may grant a period of grace for not longer than six months. /sec. 2721.10/.

G. Procedure

1. Prosecutions for violations shall be instituted by the Chief and pursued in the name of the City. /sec. 2713.06/.

2. Appeals from any decision of the Chief Smoke Regulation Engineer may be taken to the Appeal Board within 10 days thereof by filing notice with the Chief specifying the grounds of appeal and the relief sought. /sec. 2709.02/. A deposit of $20 shall accompany the appeal. /sec. 2709.03/. The Appeal Board shall set a hearing date not less than 5 nor more than 10 days from the filing, and such appeal shall serve to stay the order complained of until a decision is rendered. /sec. 2709.04/. The Board shall render its decision within 10 days of the hearing, at which the appellant may have appeared in person or by agent or attorney. /sec. 2709.05/. If the decision of the Chief is upheld, the deposit shall be forfeited; if reversed, it shall be returned. /sec. 2709.06/.

H. Penalties

Whoever violates a provision of this chapter shall be deemed guilty of a misdemeanor and for a first offense be fined not more than $50; for a subsequent offense, not more than $500. Each day's violation shall constitute a separate offense. /sec. 2713.99/.

VI. Preventive Programs

A. Installation Permits

1. Required for the construction, installation, or alteration of any fuel-burning equipment having a fuel input of 400,000 BTU per hour or greater, or any size incinerators, excepting locomotives and cooking stoves and ranges. /sec. 2721.01/.

2. Plans and specifications shall be submitted with the application for a permit, showing

/a/ Form and dimensions of the equipment, including the proposed boiler furnace, fuel-burner, stack and ducts.

/b/ Description and dimensions of the building space in which it is to be located.

/c/ Means provided for admitting the air for combustion.

/d/ Character of fuel to be used, maximum amount to be consumed per hour.

/e/ Operating requirements and use to be made of the equipment. /sec. 2721.03/.

3. Minor alterations which do not change the capacity of fuel-burning equipment or its method of combustion, and which do not adversely affect its emission of air pollutants may be made without a permit. Emergency repairs are also exempted from the requirement, provided an application for a permit is filed on the first business day after the work has been begun. /sec. 2721.04/.

4. Applications shall be passed on by the Chief within 10 days of submission. /sec. 2721.04/.

5. Violations of the permit shall be cause for a stop-work order and sealing of the equipment. Work must be begun within one year from the date of issuance or the permit shall become void. /sec. 2721.05/.

B. Operating Permits

Must be obtained for the use of any new or altered fuel-burning equipment for which an installation permit was required. Operation without such permit may be cause for the sealing of the equipment. /sec. 2721.06/.

VII. Miscellaneous

A. The City Auditor is authorized to establish a trust fund to be known as the Smoke Abatement Fund. The Chief Smoke Regulation Engineer, under the direction of the Mayor, may receive contributions to such Fund, which funds shall be turned over at once to the City Auditor who shall deposit the same in the City Treasury. Expenditures from such Trust Fund shall be in accordance with the mode prescribed by the Advisory Board; provided, however, that no expenditure shall be made from such Fund except upon voucher approved by the Mayor. /sec. 2703.05/. The City Auditor shall keep a separate account of all receipts and expenditures of the Smoke Abatement Fund, no part of which shall be commingled with any other City funds. No unexpended portion of the Fund shall at any time lapse into or become a part of the General Fund of the City. No part of such Fund shall be subject to appropriation by the City Council. /sec. 2703.06/.

B. Other Departments Issuing Permits

No permit for the erection, construction or alteration of any building, plant or structure in which the erection, construction or alteration is related in any manner to fuel-burning equipment shall be issued by any City department until the Chief Smoke Regulation Engineer has issued an installation permit covering the equipment under his jurisdiction, or indicated that the proposed installation will not violate these provisions. /sec. 2721.02/.

DAYTON, OHIO

I. Ordinances

Ordinance No. 18602, 848-5 through 848-13 of the Code of General Ordinances, November 28, 1956; Ordinance No. 19644, 1011-1 through 1011-6 of the Code of General Ordinances, May 18, 1960; and Ordinance No. 17324, Section 560 of the Building Code.

II. General Statement

These ordinances regulate the emission of dense smoke and air pollutants and also regulate the burning of garbage, waste and debris. Emissions and burnings which do not conform to stated standards and limitations are prohibited. Registrations, permits, penalties and abatement procedures are provided for as well as procedures for appeals from adverse decisions, rules, regulations or orders. "Air pollutants" are defined as dust, fly ash, cinders, fumes, gases, noxious acids, soot, odors or other materials that are of such character as to create any unclean, or destructive, or offensive or unhealthful condition when emitted or allowed to escape into the air.

III. Administrative Organization

A. Director of Service and Buildings has the responsibility of issuing permits for the use of combustion equipment, collecting fees, prosecuting violations, making inspections, abating violations and sealing equipment causing repeated violations. /secs. 560-3 and 560-4 of the Building Code, and 848-7 and 848-8 of the Code of General Ordinances/.

B. Chief, Division of Fire shall receive applications for permits and issue permits for burning of debris and shall require that such burning conforms to the applicable ordinance. /sec. 1011-4 of the Code of General Ordinances/.

C. Appeal Board shall be appointed by the City Manager and shall hear appeals from any adverse decision, ruling, regulation or order by the Director of Service and Buildings. /sec. 848-13 of Code of General Ordinances/.

IV. Applicability

A. Sources /See IV B/.

B. Specific Pollutants

1. Smoke

/a/ It is unlawful to permit the emission into the open air from any source of smoke with a density greater than No. 2 Ringelmann, or to permit the emission, from any combustion equipment or premises, gases which contain an amount of solids in excess of .85 pounds per 1,000 pounds of gases adjusted to 50 percent excess air for products of combustion. For combustion equipment or premises constructed subsequent to March 12, 1952, a dust collecting efficiency of not more than 85 percent shall be required for special dust-separating equipment, and for combustion equipment constructed prior to March 12, 1952, a dust collecting efficiency of not more than 75 percent shall be required for special dust-separating equipment. The limitations shall be waived during periods when breakdowns of equipment occurs such as to make it evident that the emission was reasonably preventable. /sec. 848-6 of the Code of General Ordinances/.

/b/ When no economically practical preventive devices are available for certain equipment which will make the emissions from such equipment conform to the ordinance, exceptions may be made if such devices as are available which materially reduce emissions are used. /sec. 848-7 of the Code of General Ordinances/.

/c/ Smoke of a density in excess of No. 2 Ringelmann will be permitted for a period not to exceed six minutes in any one hour period, but not more than 30 minutes in any 24 hour period when normal changes in the operation of combustion equipment unavoidably results in the emission of dense smoke. /sec. 848-7 of the Code of General Ordinances/.

2. Trash Burning

/a/ It is unlawful for anyone to burn garbage except in an approved incinerator within a building.

/b/ It is unlawful to burn burnable waste except between 3:00 P.M. and 6:00 P.M.; provided, that no such burning shall be done on Sunday nor within 10 feet from any building or improved property.

/c/ The wrecking of structures and the burning of the debris produced thereby must be done.

/1/ With adequate fire preventive measures including a ready fire hose and sidewalk and street blockades.

/2/ Without the emission of smoke denser than No. 2 Ringelmann or of such a nature as to cause a nuisance because of which two or more complaints are received by the city.

/3/ Without the burning of chemicals, poisons or explosive matter.

/4/ Only between 11:30 A.M. and 4:30 P.M. on days other than Saturdays and Sundays and Holidays. /sec. 1011-4 of the Code of General Ordinances/.

V. Enforcement

A. Nuisance

The emission of air pollutants in violation of these ordinances or in such a place or as to be detrimental to any person or cause or have a tendency to cause injury to property or business is a public nuisance and may be summarily abated by the Director of Service and Buildings. /sec. 848-6 of the Code of General Ordinances/.

B. Unlawful Conduct

1. It is unlawful to alter or repair any combustion equipment or air contaminant producing equipment in such a way as will alter the capacity to produce air contaminants until plans and specifications have been filed with the Director of Service and Buildings and a permit has been issued.

2. It is unlawful to violate the seal that has been placed on any fuel-burning equipment at the direction of the Director of Service and Buildings. /secs. 848-9 and 848-12 of the Code of General Ordinances/.

C. Sealings

After prior notification of three violations in a 12 month period, with respect to air pollution, the responsible person shall be required to show cause before the Director of Service and Buildings why the equipment should not be sealed. If it is found that corrective measures are available and haven't been used, the equipment shall be sealed until such corrective measures have been taken. /sec. 848-12 of the Code of General Ordinances/.

D. Appeals

Anyone taking exception to any decision, ruling, regulation, or order of the Director of Service and Buildings may appeal to the Appeal Board within ten days. The Appeal Board shall set a hearing date within five to ten days after the date of filing and shall give notice thereof to all interested parties. The Appeal Board shall render an opinion which is binding on all parties, within ten days of the hearing. /sec. 848-13 of the Code of General Ordinances/.

E. Penalties

Violation of any of the provisions of these ordinances is a misdemeanor and punishable by fine not to exceed $1,000, or by imprisonment not to exceed one year, or both. /sec. 848-11 of the Code of General Ordinances/.

VI. Preventive Programs

A. Permits

1. No person shall alter, add to or repair combustion or air pollution producing equipment without first submitting plans and specifications to the Director of Service and Buildings and the Director issues a permit therefor. /sec. 848-9 of the Code of General Ordinances/.

2. It is unlawful to burn debris from a wrecking operation without first obtaining a permit from the Chief Division of Fire. /sec. 1011-4 of the Code of General Ordinances/.

VII. Miscellaneous

Ordinance No. 19644 relating to the burning of waste makes reference to "garbage" and "burnable waste" as defined in section 823 of the Code of General Ordinances. This latter section is not digested here.

SANDUSKY, OHIO

I. Ordinance

Ordinance No. 5442-C, June 10, 1957.

II. General Statement

Ordinance prohibits dense smoke, controls stationary plants and locomotives, and provides penalties. Definition of person includes government, corporation, department, bureau, agency or any other entity recognized by law as being the subject of rights and duties who may employ, own, use, or operate any fuel-consuming device.

III. Administrative Organization

No specific enforcement agency stated.

IV. Applicability

A. Sources

1. Stationary Plant

No person, etc., who operates or is responsible for the operation of any fuel-burning equipment, internal combustion engine or open fire, except locomotives or vehicles, shall allow to be discharged therefrom smoke the shade or density of which is equal to No. 2 Ringelmann for a period aggregating 8 minutes or more in any 30 minutes. Smoke the shade or density of which is greater than No. 2 may be emitted for a period or periods aggregating 3 minutes in any 30 minutes for the following reasons only:

/a/ when building a new fire,

/b/ when cleaning a fire, or

/c/ when breakdown of equipment occurs such as to make it evident that this emission of smoke was not reasonably preventable. /sec. 3/.

2. Locomotive and Vehicles

Same as IV A 1, above. In addition, ordinance provides that a locomotive, whether operating or standing still, shall be allowed smoke the shade or density of which is greater than No. 2 Ringelmann for any reason other than those stated for one minute aggregate in any 15 minute period. /sec. 4/.

V. Enforcement

A. Penalty

Violation of ordinance deemed to be public nuisance and any person, etc., violating any of its provisions is guilty of misdemeanor and subject to fine of not less than $10 nor more than $50 for the first offense, and not less than $25 nor more than $200 for the second offense, and not less than $50 nor more than $500 for the third or subsequent offense.

VI. Preventive Program

None.

TOLEDO, OHIO

I. Ordinance

Municipal Code, Art. LX "Regulation and Control of Air and Water Pollution." /October 9, 1961/.

II. General Statement

Ordinance provides for control of pollution through Air and Water Pollution Control Officer and an Advisory Board. It sets standards; requires approvals of plans and specifications of fuel-burning equipment, provides for the sealing of equipment in violation of its provisions, requires tests of equipment or devices, and imposes penalties. Definition of person includes any government corporation, department, bureau or agency.

III. Administrative Organization

A. Advisory Board on Air Pollution, eleven members, ten appointed by City Manager and the Air and Water Pollution Control Officer, ex officio. Board acts in general advisory capacity to Air and Water Pollution Control Officer and keeps him informed as to progress in air and water pollution control technique. /sec. 3-60-2/.

1. Board has duty to act as advisor to Air and Water Pollution Control Officer and to consider and approve or veto such rules and regulations presented by him. /sec. 3-60-4/.

B. Air and Water Pollution Control Officer appointed by City Manager, is responsible for operation of Department of Air and Water Pollution Control and for enforcement of ordinance. His duties include:

1. Investigation of complaints, making of observations of air and water pollution conditions, and taking necessary steps to abate the nuisance therefrom.

2. Issuance of written approvals and notices; keeping of plans, violations, complaints and other records on file for department purposes.

3. Examination of plans for all new buildings, except dwellings, and for the alteration of all existing buildings, except dwellings, in order to assure that they are in accordance with the rules and regulations established by this article.

4. Examination of the application and plans for the construction, installation or alteration of any

fuel-burning equipment other than that intended for use in dwellings, or any equipment pertaining to air and water pollution control, and, if found to meet requirements of the rules and regulations, the the issuance of any necessary approval.

5. Publication and dissemination of information on methods of air and water pollution reduction. /sec. 3-60-4/.

6. Air and Water Pollution Control Officer authorized to prepare and promulgate, with advice and approval of Advisory Board, rules and regulations for the installation and operation of such equipment and devices as are susceptible for use in a manner which violates ordinance. He may also periodically alter, amend or rescind these rules and regulations, with the advice and approval of the Advisory Board. He may promulgate amended or additional rules and regulations. These rules and regulations shall be effective thirty days after publication and copies provided for distribution at Air and Water Pollution Officer-s office.

IV. Applicability

A. Sources

1. No person shall operate or maintain or cause to be operated or maintained any equipment or device which, by its operation will cause the emission of dusts, gases, fumes, mists, vapors, smokes and odors, without at the same time maintaining and operating efficiently equipment means, methods, devices or contrivances to reduce the quantity of dusts, gases, fumes, mists, vapors, smokes and odors emitted into the open air. These must be operated in conjunction with the sources so that the quantity of pollutants named, emitted into the open air, shall not violate the ordinance. Application of these provisions to specific cases shall take into account the number of boilers or other fuel-burning devices connected to a given stack or chimney, because the emission from a given stack or chimney is a function of the number of units connected to it. /sec. 3-60-7 /2/ /.

2. All new installations of pulverized fuel-burning equipment, spreader stokers, or any similar suspension burning types shall be provided with dust-spreading equipment as approved by the Air and Water Pollution Control Officer. /sec. 3-60-7 /6/ /.

3. All newly constructed or reconstructed solid or liquid fuel-burning plants having more than 500 square feet of boiler-heating surface or its equivalent must be equipped with smoke indicators, mirrors, or similar devices approved by the Air and Water Pollution Control Officer, to enable fireman to observe top of stacks from boiler room at all times. Where fireman is not in constant attendance in boiler room, the smoke indicator must be of a type which will sound an alarm or flash a signal to attract attention of fireman. Any existing plant emitting unlawful smoke may be required to install such indicating devices. /sec. 3-60-7 /8/ /.

B. Specific Pollutants

1. No person shall cause or allow to be emitted into the open air any foreign materials, such as dusts, gases, fumes, mists, vapors, smokes, and odors in quantities which shall be considered a nuisance because they /a/ injure, or have a harmful effect on the health or safety of any person or the public; /b/ create a disagreeable odor in the atmosphere; /c/ cause damage to property; /d/ have a deleterious effect on trees, plants or other vegetation.

2. No person shall cause, or allow to be discharged from any fuel-burning equipment, internal combustion engine, premises or open fire, smoke the shade or density of which is equal to No. 2 Ringelmann, for a period aggregating 4 minutes or more in any 30 minutes, or smoke the shade or density of which is equal to No. 2 but not greater than No. 3 Ringelmann, except for a period or periods aggregating 3 minutes in any 15 minutes when building a new fire, cleaning a fire, or when breakdown of equipment such as to make it evident that the emission was not reasonably preventable /sec. 3-60-7 /3/ /. Ringelmann Chart made part of ordinance by reference /sec. 3-60-7 /4/ /.

3. No person shall allow to be discharged from any fuel-burning equipment, internal combustion engine, railroad locomotive, vehicle, premises, open fire, or stack, fumes that are a detriment to property of others or that are a nuisance to any person not being therein or thereupon engaged. /sec. 3-60-7 /7/ /.

C. Volatility

1. No person shall cause to be discharged from any

fuel-burning equipment or premises, or to pass any convenient measuring point in the stack, dust in gases to exceed 0.85 lb. per 1000 lbs. of gases, adjusted to 12 percent CO2 content or the amount of solids in the apparatus of the A.S.M.E., as revised, which is made part of ordinance. /sec. 3-60-7 /5/ /.

V. Enforcement

A. Procedure

1. Sealing

/a/ Emission of pollutants - After any person or owner of any premises has been previously notified of three or more violations of section 3-60-7, within any consecutive 12-month period, in respect to emission of smoke, dust, gases or fumes, he shall be notified to show cause before Air and Water Pollution Control Officer why equipment causing violations should not be sealed.

Person may appear and be heard. Upon such hearing, if Air and Water Pollution Control Officer finds that adequate corrective means and methods have not been employed to correct the cause of the condition, it is his duty to seal the equipment until such time as written approval of Air and Water Pollution Control Officer has been applied for and issued for the equipment. /sec. 3-60-7 /9/ /.

/b/ Prior filing of Plans - Air and Water Pollution Control Officer required to report to Advisory Board the names of any contractor, installer, manufacturer or agent of control equipment, fuel-burning equipment, industrial or commercial process or power plant equipment, who wilfully and persistently violates rules requiring prior filing of plans and specifications for installation, extension and alteration of control equipment. Officer at the same time must furnish Board with list of such violations. On advice of Board, Officer may hold public hearing, at which the alleged violator invited to show cause why Board should not advise Officer to seal such equipment until it conforms to rules and regulations, or to refuse to accept or approve further plans, specifications of installations from such violator, or both. After hearing, Board may notify Officer of its findings and advise on the matter. Officer shall thereafter report to the Board as to the actions taken by him. /sec. 3-60-8/.

2. Testing Installations

/a/ Tests shall be made of fuel-burning equipment or of air pollution control device, where Officer deems it necessary, based on advice of Board. Such tests at expense of person making installation, and notice of time and place of test to be given to Officer. City has right to test equipment to determine actual violation if Officer deems it necessary. Owner of equipment shall give written notice to Officer not more than 30 days after completion of installation that they are ready for tests; he must also inform Officer as to when and by whom the tests are to be conducted. Officer or his agent to witness test. Right of Officer to test on behalf of City not abridged by foregoing. /sec. 3-60-9/.

B. Unlawful Conduct

1. No person shall violate seal of equipment that has been sealed at direction of Officer. Each day's violation is a separate offense. /sec. 3-60-7 /10/ /11/ /.

2. No person shall in any manner hinder or interfere with Officer or personnel in performance of duties, or refuse them entrance to premises at reasonable hours. /sec. 3-60-11/.

C. Penalties

1. All persons participating in violation of ordinance liable individually and collectively. /sec. 3-60-12/.

2. Prosecutions instituted by Officer and presented in name of City. Any person convicted of violation of ordinance liable to fine not to exceed $500. /sec. 3-60-3/.

VI. Preventive Programs

A. Plan Approval

No person shall construct, install or alter any fuel-burning equipment or any equipment pertaining thereto, other than that used to serve a dwelling, until application, including plans and specifications of fuel-burning equipment and structures or buildings used in connection therewith filed with and approved by Officer.

Plans and specifications to show form and dimensions of fuel-burning equipment and the proposed boiler, furnace, fuel-burner, stack and ducts including any other types of equipment such as kilns and cupolas, together with description of building or portion where fuel-burning equipment is to be located including means for admitting air for combustion. Fuel to be used, maximum quantity to be burned per hour, operating requirements and use to be made of such fuel-burning equipment must also be stated.

Minor alterations not changing capacity of fuel-burning equipment, and not changing method of combustion or adversely affecting emission of smoke, dust, gases or fumes, may be made without approval. Emergency repair may be made prior to application for and issuance of written approval. When emergency repair made, application for written approval must be filed on first business day following start of work.

Application approved or rejected within 10 days.

Construction, installation or alteration not in accordance with approved plans and specifications, cannot be made without approval of Officer.

Substantial deviation from approved plans sufficient cause for Officer to stop all work and seal the installation. No work may proceed until Officer assured that deviation will be corrected and work will proceed in accordance with approved plans and specifications.

No person shall violate seal of any equipment without written authorization. Each day of construction, installation or alteration is separate offense. Written approval void if construction, installation or alteration not started within one year. Issuance of written approval by Officer, not an exemption from prosecution for the emission of smoke, dust, gases, and fumes prohibited by ordinance. /sec. 3-60-6/.

VII. Miscellaneous

No permit for erection, construction or alteration of any building, plant, or structure, except dwelling, relating to fuel-burning equipment to be issued by any city department without notification to Officer of structure, occupancy and use proposed.

WARREN, OHIO

I. Ordinance

Resolution of the Board of Health, No. 10, February 20, 1939.

II. General Statement

A resolution establishing standards for the emission of smoke, cinders, ashes, dust, fly ash, gas, fumes, steam and obnoxious odors; requiring installation permits for certain equipment; and providing penalties for violations.

III. Administrative Organization

Inspector of the Board of Health. /secs. 3, 3A, 4/.

IV. Applicability

A. Sources

Locomotives, steam rollers, steam derricks, steam pile drivers, tar kettles, smoke stacks, chimneys, boilers, furnaces or other apparatus. /sec. 1/.

Stokers must have a minimum distance between tuyeres and belly of the boiler as set forth in the schedule incorporated in the ordinance. /sec. 3A/.

B. Specific Pollutants

1. Smoke of a density equal to or greater than No. 2 Ringelmann is designated "dense" and is prohibited except for:

/a/ a period not to exceed 2 minutes at any one time, or

/b/ periods not aggregating more than 8 minutes in any one hour. /sec. 1/.

2. Cinders, ashes, dust, fly ash, gas, fumes, steam and offensive odors emitted "to the detriment or annoyance of any person" are prohibited. /sec. 1A/.

Note - the provisions of this resolution do not apply to buildings occupied exclusively for residential purposes by less than four families. /sec. 1/.

V. Enforcement

A. Penalties

Failure to comply with a notice to abate the nuisance occasioned by a violation hereof within 24 hours shall subject the violator, on conviction, to a fine of not less than $10 nor more than $100 for each offense. /sec. 4/.

VI. Preventive Programs

A. Permits

1. Required for the construction, installation, alteration or repair of boilers, furnaces, furnace boilers, stacks or other apparatus. /sec. 3/.
2. Plans and specifications to be submitted to the Inspector of the Board of Health. If he approves them as conforming to the smoke control requirements, he shall issue a permit. /sec. 3/.
3. Similar permits shall be required for the installation of stokers in any boiler, furnace boiler, furnace, or any heating and/or power plant. /sec. 3A/.

YOUNGSTOWN, OHIO

I. Ordinance

Ordinance No. 54639, February 13, 1952; as amended April 1, 1956 and December 22, 1960.

II. General Statement

Ordinance prohibits the emission of dense smoke and particulate matter of a certain density. It provides for installation permits, inspections, operating certificates, hearings, appeals and penalties for violations.

III. Administrative Organization

Chief Smoke Regulation Engineer, advised by Advisory Board and an Appeal Board, all appointed by the mayor. The Chief Smoke Regulation Engineer has the duty to make investigations, abate nuisances, issue permits, keep records of violations and publish information on methods of smoke reduction.

IV. Applicability

A. Sources

Steam locomotives using solid fuel, other than road engines which are serviced in roundhouses which are so equipped as to enable them to comply with this ordinance with respect to the emission of dense smoke, shall use smokeless fuel or be equipped with fuel-burning equipment or devices. /sec. 34.13/.

B. Specific Pollutants

1. Smoke

The emission of smoke of a density equal to or greater than No. 2 Ringelmann is prohibited, except that when a firebox is being cleaned out or a new fire is being built therein, smoke of a density equal to No. 2 may be emitted for not more than nine minutes in one hour, or of a density greater than No. 2 may be emitted for no more than six minutes in one hour, and after a locomotive is in or ready for service, smoke of a density equal to or greater than No. 2 may be emitted for no more than one minute in one hour. /secs. 34.10 and 34.11/.

2. Particulate matter

a. No person shall cause or allow the emission from any stack of soot, cinders, noxious acids, fumes or gases in such place or manner as to cause detriment or nuisance or to endanger the comfort, health or safety of any person or to cause injury or damage to business or property.

b. No person shall operate or cause to be operated, or cause to be maintained, any furnace or combustion device for the burning of coal without maintaining and operating recognized and approved means to reduce the quantity of fly ash emitted so that it does not exceed 0.75 grains per cubic foot of flue gas at a stack temperature of 500 degrees F., of which no more than 0.20 of a grain per cubic foot shall be of such size as to be retained on a 325 mesh U.S. Standard Sieve. These conditions are to be conformed to when the percentage of excess air in the stack does not exceed fifty percent at full load. These requirements shall be measured according to the A.S.M.E. test code. /sec. 34.12/.

V. Enforcement

A. Abatement

Emission of smoke or particulate matter in violation of the standards of this ordinance is declared a public nuisance and may be summarily abated by the Chief Smoke Regulation Engineer or his representative. /secs. 34.10 and 34.12/.

B. Reports

Persons in the business of selling refuse or fuel-burning equipment for producing heat or power, other than gas-fired installations which are required to be connected to a vent or stack shall report to the Chief Smoke Regulation Engineer the sale of every such article to be installed or used within the city. The purchaser shall inform the seller of the address at which the article is to be installed or used. These provisions shall not apply to wholesale transactions made for the purpose of resale. /secs. 34.21 and 34.22/.

C. Inspections

The Chief Smoke Regulation Engineer is authorized to enter at reasonable hours the places of business of any person engaged in the selling of refuse or fuel-burning equipment or devices, and to examine all books, papers and records pertaining to sales. /sec. 34.23/.

D. Variance

When any person erects, reconstructs or modifies an open hearth or other steel making furnace so as to use the injection of oxygen into the bath, a ten-year period after installation of the oxygen injection equipment shall be allowed for the conduct of research on practicable methods for control of the smoke from such process, during the continuance of which the emissions from such furnace shall be exempt from the provisions of this ordinance, and an extension of such exemption may be granted for good cause by the Chief Smoke Regulation Engineer with the consent of the Mayor. /sec. 34.11 /c/ /.

E. Sealing

After any person has been previously notified of three or more violations within a 12-month period, with respect to emissions of air pollutants, the person shall be notified to show cause before the Chief Smoke Regulation Engineer not less than ten days from the date of notice, why the equipment should not be sealed. Upon the hearing, if the Chief Smoke Regulation Engineer finds that adequate corrective means have not been used to correct the cause of violations he shall seal the equipment until a permit has been applied for and issued. It is unlawful to break a seal that has been duly placed unless authorized by the Chief Smoke Regulation Engineer. /secs. 34.29, 34.30, 34.31, 34.33/.

F. Unlawful Conduct

Any person who refuses to comply with or who assists in the violation of this ordinance or who in any way interferes or attempts to interfere with the Chief Smoke Regulation Engineer or Police Officers in the performance of duties herein enjoined or refuses them entrance at reasonable hours to any premises in which this ordinance is being violated or refuses to permit the inspection of such premises for the purpose of enforcement of this ordinance, shall be subject to the penalties provided. /sec. 34.35/.

G. Procedure

Any person taking exception to any decision, ruling, regulation or order of the Chief Smoke Regulation Engineer may appeal to the Appeal Board within 10 days of notice of the act complained of. Such appeal shall be a stay of the act in question. The decision of the

Board shall be binding. /sec. 34.34/.

H. Penalty

Any person who shall violate any of these provisions shall, upon conviction thereof, be fined from $25 to $100, and in default of payment shall be imprisoned for a period not exceeding 30 days.

VI. Preventive Programs

A. Permit

No person shall construct, reconstruct, repair or add to any fuel or refuse-burning equipment or stack or furnace connected thereto until a permit has been applied for and issued therefor by the Chief Smoke Regulation Engineer. These provisions shall not apply to gas-fired installations. /sec. 34.14/.

Applications for permits must be accompanied by plans and specifications which shall show the amount of work and heating to be done, the means to be employed to secure complete combustion and to prevent air pollution, the rate of burning, fuel or refuse to be burned, room in which burning shall be located, means of ventilation to keep the room temperature below 120 degrees F. and change the air every ten minutes, the dimensions and location of all stacks, and such other information as the Chief Smoke Regulation Engineer may require. /sec. 34.15/.

Upon approval of plans and specifications a permit shall be issued, after which, the work shall be in conformity with the approved plans and specifications. If plans and specifications are not submitted to the Chief Smoke Regulation Engineer previous to the installation of any new fuel-burning plant, or addition to, repair or reconstruction of any fuel- or refuse-burning plant, the Chief Smoke Regulation Engineer is authorized to seal such plant until this ordinance is complied with. /secs. 34.16, 34.17, 34.20/.

Repairs to previously approved fuel- or refuse-burning plants may be made but must be reported to the Chief Smoke Regulation Engineer within three days after such repairs are begun. Emergency repairs which require dismantling of the heating or power plant and results in the restoration of the equipment to its original state may be made when such emergency arises outside of the business hours of the Chief Smoke Regulation Engineer if such are reported to the Engineer on the first business day following and a permit is applied for. /secs. 34.17, 34.18 and 34.19/.

B. Certificate of Operation

It is unlawful to use or operate any furnace or other fuel-burning equipment, except gas-fired installations, without first obtaining an annual certificate of operation; provided, however, if application for such certificate has been made and the required fee paid, such equipment may be used until the certificate has been issued or refused. /sec. 34.26/.

C. Equipment

Every power and heating plant, other than those in which the only fuel is gas, and buildings used exclusively for dwellings and containing less than six units, shall be equipped so that the fireman may know, without leaving the boiler or furnace room, whether or not prohibited smoke is issuing from the stack. /sec. 34.38/.

D. Fees

Fees shall be charged for permits, certificates and for inspections. /sec. 34.37/.

ZANESVILLE, OHIO

I. Ordinance

Ordinance No. 4650. Smoke Abatement Ordinance.

II. General Statement

Ordinance establishes a division of smoke regulation and inspection, under the supervision of a Chief Smoke Regulation Engineer; it provides for an advisory board and an appeal board. It requires approval of plans and specifications, installation and operating permits and annual inspections and provides penalties. In definitions section, "person" includes any government corporation, department, bureau or agency.

III. Administrative Organization

A. Chief Smoke Regulation Engineer, heads division of smoke regulation and inspection. He is appointed by Director of Public Safety. /sec. 3/.

Duties of Chief Smoke Regulation Engineer include /sec. 4/:

1. Investigation of complaints and making of inspections and observations of smoke.
2. Issuance of permits, certificates and notices, keeping of applications, plans, permits, certificates, violations, complaints and other records.
3. Examination of plans for all new buildings and for alteration of existing buildings.
4. Examination of applications and plans for construction, installation or alteration or any fuel-burning equipment or any equipment pertaining thereto, and issuance or installation permits.
5. Inspection of installation of all equipment for which a permit has been issued, and issuance of operating permits.
6. Annual inspection of fuel-burning equipment.
7. Publication and dissemination of information on methods of smoke reduction.
8. Enlistment of cooperation of civic, technical, scientific and educational societies.
9. Promulgation of rules and regulations with advice and

approval of advisory board, pertaining to: /a/ installation and operation of fuel-burning equipment. /b/ necessary auxiliary devices which aid in meeting requirements of ordinance. He may alter, amend and rescind such regulations with advice and approval of advisory board. Rules and regulations become effective 30 days after publication. /sec. 5/.

B. Advisory Board of 5 members appointed by Mayor with approval of City Council. /sec. 3/.

Advisory Board to act as advisor to Chief Smoke Regulation Engineer and may consider and approve or veto, in whole or in part, such rules and regulations as may be adopted by Chief Smoke Regulation Engineer. Upon request advisory board to confer with and advise the City Council and Mayor with reference to problems or smoke regulation. /sec. 6/.

C. Appeal Board of 5 members appointed by Mayor with approval of City Council. /sec. 3/.

IV. Applicability

A. Sources
/See IV B, and VI/

B. Specific Pollutants

1. Person operating or responsible for operation of internal combustion engine or open fire, except locomotives or vehicles, cannot allow to be discharged therefrom smoke the shade or density of which is equal to No. 2 Ringelmann for period aggregating 8 minutes or more in any 30 minutes. Smoke or density greater than No. 2 Ringelmann, may be emitted for a period or periods aggregating 3 minutes in any 30 minutes when building a new fire, when cleaning a fire or when breakdown of equipment occurs such as to make it evident that this emission of smoke was not reasonably preventable.

2. Person operating or responsible for operation of locomotive or vehicle, cannot allow to be discharged therefrom smoke the shade or density of which is greater than No. 2 Ringelmann for a period aggregating 8 minutes or more in any 30 minutes. Smoke the shade or density of which is greater than No. 2 Ringelmann may be emitted for a period or periods aggregating 3 minutes in any 15 minutes

when building a new fire, when cleaning a fire or when breakdown of equipment occurs such as to make it evident that the emission was not reasonably preventable.

A locomotive whether operating or standing still shall be allowed smoke greater than No. 2 Ringelmann for any reasons other than those above for one minute aggregate in any 15 minute period.

3. No person operating or responsible for operation of any fuel-burning equipment, internal combustion engine, locomotives, vehicles, premises, open fire or stack shall cause or allow to be discharged therefrom any fumes that are a nuisance to any person not therein or thereupon engaged, or that are a detriment or injurious to the property of others.

C. Volatility

No person operating or responsible for operation of any fuel-burning equipment shall cause or allow to be discharged therefrom, or to pass any convenient measuring point in the stack thereof, dust in gases to exceed 0.85 percent per 1000 lb. of gases, adjusted to 2 percent CO2 content for products of combustion. Test Code of A.S.M.E., cited as standard for measurement of amount of solids in gases. /sec. 10/.

V. Enforcement

A. Annual Inspections

Annual inspections of all fuel-burning equipment shall be made, except locomotives, equipment in private residences, equipment in one building containing 4 or less dwelling units, equipment in buildings that do not have a central heating plant, cooking stoves or ranges, service water heaters and room or space heaters. Inspection made to determine if such equipment and plant can be operated within provisions of ordinance. Fact that operating permit or certificate of operation has been previously issued will not exempt holder from provisions of this section.

Upon notice that equipment complies with ordinance and after payment of fee. /Fee schedule listed in section 9 of Ordinance/, Chief Smoke Regulation Engineer shall issue a certificate of operation, which must be posted conspicuously in room where fuel-burning equipment is located or where equipment not in a room; conspicuously on premises.

If, at annual inspection or any time after issuance of certificate of operation, it is found that equipment cannot be operated in compliance with ordinance, Chief Smoke Regulation Engineer shall give written notice to owner, operator or person in charge of the defects found and an order to correct, repair or replace the defective equipment. Failure to comply within 30 days is a violation and the Chief Smoke Regulation Engineer is authorized to seal equipment. Period of grace, however, may be allowed by appeal board for not longer than 6 months when it is shown that it would not be possible to comply with order within 30 day period. /sec. 8/.

B. Administrative Procedure

1. Sealing
/See also Topical Outline V A, and VI/

Person previously notified of three or more violations in respect to the emission of smoke dust or fumes must show cause before Chief Smoke Regulation Engineer within 10 days of notice so to do, why equipment causing such violation should not be sealed. Notice can be by mail to last known address, or by posting on premises if his whereabouts is unknown. Person may appear and be heard. At hearing if Chief Smoke Regulation Engineer finds that adequate corrective means and methods have not been employed he shall seal the equipment which shall revoke all rights of operation under prior operating permits. Equipment shall remain sealed until operating permit applied for and issued. Person owning or leasing premises may appeal the finding to appeal board, within 10 days of decision. Pending decision on appeal sealing is stayed. /sec. 10/. Unlawful to violate seal without written permission of Chief Smoke Regulation Engineer. /sec. 14 /b/ /.

2. Appeal Procedure

Person taking exception to any decision, ruling, regulation or order of Chief Smoke Regulation Engineer may appeal to appeal board, within 10 days after action complained of, or by filing notice of appeal specifying grounds and relief sought with Chief Smoke Regulation Engineer directed to Appeal Board. Deposit of $20 must be posted at time of filing. Chief Smoke Regulation Engineer must forthwith furnish Appeal Board all papers relating to decision, ruling, regulation or order appealed. Appeal Board to set date for hearing not less than 5 nor more than 10 days after filing of appeal, and shall give notice to all interested parties. Appeal acts as a stay of decision ruling, regulation or order until decision is rendered.

Appeal Board shall within 10 days of hearing affirm, modify or set aside action of Chief Smoke Regulation Engineer. Decision binding on Chief Smoke Regulation Engineer. Appellant may appear in person or by counsel or agent. Costs of hearing borne by losing party. /sec. 13/.

C. Reports of Sales

Persons retailing fuel-burning equipment required to give written report to Chief Smoke Regulation Engineer of sale or lease of every piece of such equipment to be installed or used in city, within 10 days of sale or lease. Report to include address at which equipment to be used. /sec. 11/.

D. Right of Entry

Person cannot refuse, hinder, obstruct, delay, resist or interfere with Chief Smoke Regulation Engineer or his personnel in the performance of their duty, or to refuse entrance at reasonable hours. /sec. 12/.

E. Nuisance

Emission of smoke from any source except as provided in ordinance is public nuisance, subject to summary abatement by Chief Smoke Regulation Engineer. /sec. 14 /c/ /.

F. Penalties

1. Persons liable - all persons, firms, corporations, owning operating or in charge of any equipment who cause permit or participate in any violation of ordinance individually and collectively liable. /sec. 14 /a/ /.

2. Fines - any person violating ordinance deemed guilty of misdemeanor, upon conviction fined not less than $10 nor more than $50 for first offense, not less than $25 nor more than $100, for second offense, not less than $50, nor more

than $200 for third or subsequent offense. /sec. 15/.

3. Proceedings - prosecutions instituted by Chief Smoke Regulation Engineer in name of City. Each day's violation of provisions of ordinance is separate offense. /sec. 14 /d/ /.

VI. Preventive Programs

A. Permits

1. Installation Permits

Construction, installation or alteration of fuel-burning equipment or equipment pertaining thereto, except locomotives, cooking stoves, ranges, service water heaters and room or space heaters, for use within city, cannot be made until application for permit, including suitable plans and specifications of the fuel-burning equipment and structures or building used in conjunction therewith has been filed in duplicate, and approved by Chief Smoke Regulation Engineer and an installation issued.

Plans to show form and dimensions of fuel-burning equipment, proposed boiler, furnace, fuel-burner, stack and ducts, and descriptions and dimensions of building in which equipment to be located. Character of fuel, maximum quantity of fuel to be burned per hour, operating requirements for use to be made of equipment also to be stated.

Minor alterations which do not change capacity of fuel-burning equipment, do not involve change in method of combustion or adversely affect emission of smoke, dust or fumes, may be made without installation permit.

Emergency repairs may be made prior to application, but such application for the installation permit must be made on first business day following start of emergency work. Application to be approved or rejected within 10 days after filing. Upon approval and payment of fees /fee schedule listed in section 9/ Chief Smoke Regulation Engineer shall issue permit for construction, installation or alteration of fuel-burning equipment. No changes in plans, specifications or other pertinent information upon which permit issued can be made without approval.

Violation of installation permit is cause for Chief Smoke Regulation Engineer to stop all work and seal installation. Construction, installation or alteration not started within year of date of permit, it becomes void; fees are forfeited.

2. Operating Permits

Use of new or altered fuel-burning equipment or equipment pertaining thereto for which installation permit issued, not allowed until operating permit issued by Chief Smoke Regulation Engineer; he is authorized to seal equipment for which operating permit not obtained.

3. Issuance of installation or operative permit not an exemption from prosecution for emission of smoke, dust or fumes prohibited by ordinance. /sec. 7/.

VII. Miscellaneous

Other City departments cannot issue building or construction permits in which the erection, construction or alteration is related to fuel-burning equipment, until Chief Smoke Regulation Engineer has issued an installation permit pursuant to section 7. /sec. 16/.

City auditor authorized to establish trust fund, known as "Smoke Abatement Fund". Contribution may be received by Chief Smoke Regulation Engineer, who shall immediately turn them over to Auditor for deposit. Expenditures made in accordance with mode prescribed by Advisory Board, but no expenditure made except on voucher approved by Mayor. /sec. 17/.

EUGENE, ORE.

I. Ordinance

Ordinance No. 10862, Chapter 38A of the City Code, December 29, 1959. Ordinance No. 11255, Section 10, Section 26-01 B of the City Code, April 15, 1958. Citations herein are to the City Code.

II. General Statement

These ordinances prohibit certain emissions of smoke, sawdust, particulate matter, sulphur compounds, and solid particles of combustion; provide for measurements; set forth certain equipment requirements; and provide for penalties for violations.

III. Administrative Organization

Section 26-01 of the City Code is to be enforced by the Fire Marshal's Office. Chapter 38A of the City Code is to be enforced by the Air Pollution Control Officer. /secs. 38A.2 and 38A.9/.

IV. Applicability

A. Sources

1. No person shall burn any outdoor fire between May 15 and October 1 except during a rainy or wet period, and then only after receiving approval from the Fire Marshal's Office or except in the manner hereinafter provided:

/a/ That any outdoor fire burned within said period, or during any closed period, shall be contained in a solid masonry, brick, metal or stone outdoor-type incinerator.

/b/ The minimum requirements for a domestic outdoor incinerator shall be: An incinerator with less than nine square feet or grate area shall have a wall thickness of not less than 2 inches of reinforced concrete, or 4 inches of brick, or be constructed of pumice or concrete block material, set on a non-combustible base, with a permanently attached spark arrestor, constructed of not more than 1/2 inch mesh installed at the top. The door shall be of the self-closing type, constructed of not less than No. 14 U.S. Standard gauge metal. There shall be a permanent metal grate installed at least 10 inches above the base to insure a good draft and rapid burning of the trash; a self-closing cleanout door shall be provided at the bottom.

/c/ The minimum requirements for a metal domestic outdoor incinerator having a grate area less than 9 square feet shall be: a double wall, cylindrical shell with a 2 inch air space between the inner and outer walls, with an opening at the bottom. The inner wall shall be not less than No. 14 U.S. Standard gauge metal, and the outer wall shall be not less than No. 20 U.S. Standard gauge metal. A permanently attached spark arrestor of not more than 1/2 inch mesh shall be installed at the top. A self-closing type door shall be provided for filling the incinerator. There shall be a metal grate at least 10 inches above the base to insure a good draft and permit the rapid burning of trash. A self-closing type cleanout door shall be provided at the bottom.

/d/ All domestic incinerators shall be installed not closer than 15 feet from any building or side property lines, and not less than 3 feet from alley and street lines. /sec. 26.01/.

2. The following fires are excepted from any further provisions herein:

/a/ Fires used for cooking food for human beings or recreational purposes.

/b/ Fires for disposal of household rubbish originating at one and two family dwellings except animal and vegetable waste resulting from the canning, preserving, freezing, handling, preparation, cooking and serving of food. Which fires are maintained by the occupants of the dwelling, at the dwelling, and only between the hours of 6:00 o'clock in the morning and sunset.

/c/ Any fire set or permitted by the Fire Marshal for the purpose of weed abatement, the prevention of a fire hazard, including the disposal of dangerous materials where there is no safe alternate method of disposal, for the instruction of private and plant personnel in methods of fire fighting which is, in the opinion of the Fire Marshal, necessary.

/d/ Fires set for instruction of fire fighting personnel in fire fighting, providing permission has been granted by the Fire Marshal and the Air Pollution Control Officer.

/e/ No open burning is permitted in a certain city area, except in an approved type incinerator.

/f/ Fires set to dispose of waste incident to the clearance and development of land for subdivision or building purposes with the approval of the Fire Marshal and the Air Pollution Control Officer.

/g/ No open burning by any commercial establishment except by approval of the Fire Marshal and the Air Pollution Control Officer in M-1, M-2, and M-3 zones, set forth in the zoning ordinance. /sec. 38A.2/.

3. Smoke

No person shall cause or permit the emission of smoke of a density equal to or greater than No. 2 Ringelmann, except for not more than three consecutive minutes or for not more than six minutes in one hour when building a new fire or in case of an unpreventable breakdown. /secs. 38A.3 and 38A.4/.

4. No person shall discharge such quantities of sawdust, air contaminants or other materials which endanger the comfort, health or safety of any person or cause or have a tendency to cause injury to business or property at any time either of the following area conditions exist:

/a/ Whenever the fallout of particulate matter exceeds 12 tons per square mile per month, as determined by sampling technique by the Oregon State Sanitary Authority, except that in areas zoned for heavy industry, the fallout may be 50 tons per square mile per month.

/b/ Whenever the total airborne particulates exceed 200 micrograms per cubic meter as determined by sampling techniques developed by the Oregon State Sanitary Authority except that in areas zoned for heavy industry the particulate matter may be 300 micrograms per cubic meter. /sec. 38A.5/.

5. No person shall discharge particulate matter in excess of 0.4 grains per cubic foot of air. /sec. 38A.6/.

6. No person shall discharge one or more of the following contaminants in any state or combination in excess of the stated amount.

/a/ Sulphur compounds /calculated as SO2/ - 0.2 percent by volume.

/b/ Solid products of combustion - 0.4 grains per cubic foot of gas calculated to 50 percent excess air. /sec. 38A.7/.

V. Enforcement

A. Nuisance

A violation of IV B 1 is declared a public nuisance and may be summarily abated by the City. /sec. 38A.3/.

B. Testing

"Persons responsible for a suspected source of air pollution," upon request of the Air Pollution Control Officer shall provide stack data describing operating conditions and conduct such study in a manner and with equipment approved by the State Sanitary Authority and/or the Air Pollution Control Officer. /sec. 38A.9/.

C. Penalties

Violations of any provision are punishable by imprisonment of not more than 100 days or fine of not more than $200.00 or both. /sec. 38A.10/.

VI. Preventive Programs

None.

ALLEGHENY COUNTY, PA.

I. Regulation

Allegheny County Health Department Rules and Regulations, Article XIII; Sections 1301 through 1319, August 1, 1960.

II. General Statement

These Rules and Regulations establish limitations upon the emission of smoke, fly ash, soot, cinders, toxic or radioactive substances, waste, noxious or obnoxious acids, fumes, oxides, gases, vapors, odors, dusts, or any other matter that is of such character as to create atmospheric pollution from any stack, chimney, portable boiler, vehicle, process, open fire, or other source within the county; defines nuisances respecting the same and makes special provision for process and equipment for which feasible methods of measurement and control of emissions have yet to be developed; establishes a Bureau of Air Pollution Control; provides for appointment and duties of its officers and employees; provides for the administration and enforcement of these Rules and Regulations; provides for an Air Pollution Control Advisory Committee; provides for permits for the installation, construction, addition to, alteration, and use of fuel- and refuse-burning plants, processes, equipment, and devices, and smoke abatement, dust arresting, and air pollution control equipment or devices, and for fees for the same; regulates the sale, use, and consumption of certain solid fuels; regulates the sale of equipment and devices; provides for inspections and tests of fuel- and refuse-burning equipment and devices, plants, and processes and for the issuance of permits and certificates of operation and for fees therefor; provides for fines and penalties for violation of these Rules and Regulations.

Air Pollution is defined as the discharging from stacks, chimneys, openings, buildings, structures, open fires, vehicles, processes, or any other source of any smoke, soot, fly ash, dust, cinders, dirt, noxious or obnoxious acids, fumes, oxides, gases, vapors, odors, toxic or radioactive substances, waste, or any other matter in such place, manner, or concentration inimical to the health, safety, or welfare of the public, business, or property, or in excess of the limitations established in these Rules and Reguations.

Person includes any agency, government corporation, authority, department, bureau, or instrumentality of federal, state or local government.

III. Administrative Organization

Air Pollution Control Advisory Committee appointed by the Board of County Commissioners with the duty to recommend to the Board of Health appropriate means of air pollution abatement including additions and revisions to these Rules and Regulations. The subcommittees of the Committee shall stimulate research on phases of air pollution control. The Committee shall be headed by a Director. /secs. 1303.1 through 1303.5/.

Bureau of Air Pollution Control, headed by a Chief, shall administer and enforce these Rules and Regulations. /sec. 1304/.

IV. Applicability

A. Sources - See IV-B.

B. Specific Pollutants

1. No person shall cause, suffer, or allow to be emitted into the open air from any fuel-burning equipment, internal combustion engine, premise, open fire, or stack, smoke the appearance, density, or shade of which is darker than No. 2 Ringelmann, except as is otherwise stated below. /sec. 1305.3/.

2. No person shall cause, suffer, or allow to be emitted into the atmosphere from any fuel-burning equipment or premise, or to pass a convenient measuring point near the stack outlet, particulate matter in the gases to exceed 0.65 pounds per 1,000 pounds of gases adjusted to 50 percent excess air in the products of combustion. This standard shall be calculated according to the A.S.M.E. Test Code. /sec. 1305.4/.

3. The prohibitions in IV-B, 1 and 2 shall not apply to uncontrollable emissions occasioned by breakdown of fuel-burning equipment on other failure which is not reasonably preventable, or by the maintaining and repairs of air pollution control equipment. At such occurrences, the person responsible shall report the occurrence to the Bureau. /sec. 1305.5/.

4. In respect to locomotives, boats, and other vehicles, the following exceptions to the provisions of IV-B, 1 and 2 shall be permitted.

/a/ Solid-Fuel Fired

When a firebox is being manually cleaned or a new fire is being built in a locomotive, boat, or other vehicle, except steam towboats, smoke shall be permitted of a density darker than No. 2 Ringelmann for a period aggregating not more than four minutes in any 60 minutes.

/b/ Diesel

Immediately after starting the engine of a diesel locomotive, boat, or other vehicle, smoke shall be permitted of a density greater than No. 2 Ringelmann for not more than four minutes during the first 15 minutes. Immediately after starting the steam generator on a diesel locomotive, smoke shall be permitted of a density greater than No. 2 Ringelmann for not more than two minutes. After a diesel locomotive, boat, or other vehicle is in or ready for service, smoke of a density greater than No. 2 Ringelmann shall be permitted for not more than one minute in any 15 minutes, except that in the cases of towboat fleet maneuvers and diesel locomotive switching operations, smoke may be emitted of a density greater than No. 2 Ringelmann for one minute at each start-up or reversal of the vehicle.

/c/ Steam-propelled towboats

The provisions of IV-B, 1 and 2 shall apply to steam-propelled towboats except as follows:

/1/ When building a new fire, smoke of a density in excess of No. 2 Ringelmann will be permitted for not more than 20 minutes in any 60 minutes.

/2/ When fire is being cleaned, smoke in excess of No. 2 Ringelmann is permitted for not more than 12 minutes while the operation is being performed.

/3/ When a towboat is equipped with soot blowers and combustion chamber cinder ejectors, smoke in excess of No. 2 Ringelmann shall be permitted for no longer than six minutes in any 60 minutes.

/4/ When a towboat is approaching or passing through a lock and until under full headway after leaving a lock, smoke in excess of No. 2 Ringelmann shall be permitted for not longer than 12 minutes in any 60 minutes.

/5/ When a towboat is in service, except as provided in the situations above, smoke in excess of No. 2 Ringelmann shall be permitted for not more than eight minutes in any 60 minutes.

/6/ Under high water or flood conditions, when it is necessary to continuously operate a boat with a peak load upon the boilers, to prevent a stoppage of operations and to prevent danger to life and property, none of the restrictions on the emission of smoke shall apply. These conditions shall be held to exist at any time the rivers rise to the extent that pool conditions at Pittsburgh no longer exist.

d. All buses and trucks registered in the county shall be equipped with smoke elimination equipment within six months after two or more such devices have been approved by the Allegheny County Health Department. /sec. 1306/.

5. With respect to power plants, heating plants, and domestic heating plants, the following exception to the provisions of IV-B, 1 and 2 are permitted: When building a new fire, manually cleaning a fire, blowing tubes and flues, or cleaning air pollution control equipment, smoke in excess of No. 2 Ringelmann and particulate matter in excess of the limit may be emitted for not more than six minutes in any 60 minutes. /sec. 1307/.

6. The steel and allied industries.

/a/ The provisions of IV-B, 1 and 2 shall not apply to blast furnaces, but shall conform to the following provisions:

/1/ Blast furnaces shall be equipped with gas cleaning devices and shall not discharge particulate matter in excess of 0.35 pounds per 1,000 pounds of gases.

/2/ Excess blast furnace gas being bled to the atmosphere shall contain no more than 0.50 pounds of particulate matter per 1,000 pounds of gases and shall be burned as bled to the atmosphere.

/3/ All iron blast furnaces shall be equipped with measuring devices which shall show a graphic record of the time and duration of all irregular movements of the burden, and of the time and duration of all openings of the blast furnace automatic relief valves, and such information shall be furnished to the Health Department as requested.

/4/ The above provisions shall not apply during irregular movements of the furnace burden when it is necessary to open the automatic relief valves at the top of the furnace for safe operation. /sec. 1308.2/.

/b/ By-product coke plants. The provisions of IV-B, 1 shall apply to by-product coke ovens except as follows:

/1/ When charging a battery of coke ovens or when pushing coke from a battery of coke ovens, smoke in excess of No. 2 Ringelmann shall be permitted for no more than 12 minutes in any 60 minutes.

/2/ Coke oven doors, frames, and ovens shall be so maintained that smoke or fumes darker than No. 2 Ringelmann will not escape to the atmosphere. /sec. 1308.3/.

/c/ No beehive coke ovens shall be operated within the County. /sec. 1308.4/.

/d/ The provisions of IV-B, 1 and 2 shall not apply to open hearth and electric furnaces, and sintering plants.

/1/ All open hearth furnaces, electric furnaces, and sintering plants constructed subsequent to the enactment of these Rules and Regulations shall be equipped with gas cleaning devices to reduce the particulate matter in the gas discharged to the atmosphere to 0.20 pounds or less per 1,000 pounds of gases.

/2/ For all open hearth furnace plants, electric furnace plants, and sintering plants which were constructed prior to the enactment of these Rules and Regulations, a program for the continued installation of gas cleaning devices, or alternatively, a program for the replacement of specified plant facilities shall be recommended by the Advisory Committee to the Board of Health. Each gas cleaning program shall employ devices so as to reduce the particulate matter to 0.20 pounds or less per 1,000 pounds of gases. The Advisory Committee shall annually report the status of these gas cleaning programs to the Board of Health.

/3/ The provisions herein set forth shall not apply to electric furnaces when the gas collection system is necessarily disconnected from the furnace, as in charging and pouring. /sec. 1308.5/.

/e/ The provisions of IV-B, 1 and 2 shall not apply to basic oxygen steel furnaces. All basic oxygen steel furnace plants shall be equipped with gas cleaning devices to reduce the particulate matter to 0.20 pounds per 1,000 pounds of gases. /sec. 1308.6/.

/f/ The provisions of IV-B, 1 and 2 shall not apply to Bessemer Converters in existence at the time of the enactment of these Rules and Regulations. No new Bessemer Converter shall be constructed within the County until air pollution control equipment has been developed so that the operation will comply with IV-B, 2. /sec. 1308.7/.

/g/ The provisions of IV-B, 1 and 2 shall not apply to cupolas in existence at the time of the enactment of these Rules and Regulations. All new cupolas shall be equipped with gas cleaning devices and be operated so as to comply with IV-B, 1 and not discharge particulate matter in excess of 0.50 pounds per 1,000 pounds of gases. /sec. 1308.8/.

/h/ Heating and reheating furnaces shall comply with IV-B, 1; except that smoke in excess of No. 2 Ringelmann shall be permitted for not more than 6 minutes in any 60 minutes. In addition, particulate matter emissions shall not exceed 0.30 pounds per 1,000 pounds of gases. /sec. 1308.9/.

/i/ The provisions of IV-B, 1 shall apply to the operation of air furnaces, except that smoke in excess of No. 2 Ringelmann shall be permitted for no longer than six minutes in any 60 minutes. Particulate matter discharge shall not exceed 0.50 pounds per 1,000 pounds of gases. /sec. 1308.10/.

7. Incinerators, dryers, kilns, roasters, and other miscellaneous equipment and open fires shall be operated so as to conform with IV-B, 1; except as follows:

/a/ When starting up a dryer, kiln, roaster, and other equipment used in connection therewith, smoke in excess of No. 2 Ringelmann shall be permitted for no longer than 12 minutes in any 60 minutes. /sec. 1309.2/.

/b/ All incinerators.

/1/ Incinerators shall consume not less than 95 percent of all combustible material charged into them, except that domestic gas-fired incinerators shall meet the standards in the American Standard Association publication Z-21.6-1957, or latest revision thereof.

/2/ Smoke emitted from any incinerator shall be lighter than No. 1 Ringelmann.

/3/ No person shall cause, suffer or allow to be emitted from any incinerator fly ash in the gases to exceed 0.20 pounds per 1,000 pounds of gases. /sec. 1309.3/.

/c/ Open fires connected with the refuse from a coal mine, coal preparation plant, or other coal mining or coal processing operation shall be governed as follows:

/1/ All persons responsible for such a fire shall extinguish it forthwith or show the Chief of the Bureau of Air Pollution Control that due diligence is being exercised to accomplish this purpose.

/2/ All refuse placed on existing piles shall be laid down in accordance with the most effective industrial practices for the control of such areas.

/3/ All persons responsible for refuse piles shall provide adequate protection of such refuse to prevent firing of the refuse.

/4/ No new refuse piles shall be laid down unless the Bureau of Air Pollution Control has approved the proposed site as being properly cleared of combustible material and vegetation.

/5/ No person shall deposit combustible refuse on a burning pile unless it is placed pursuant to a planned operation in accordance with /2/ above.

/6/ Should a fire be ignited due to any cause, the person responsible for the area of location shall give written notice of the cause and the estimated date of extinguishment to the Bureau of Air Pollution Control, and shall use the most effective industrial practices for the extinguishing of said fire.

/7/ As soon as any open fire has been extinguished, the Bureau of Air Pollution Control shall be notified of such fact in writing.

/8/ An annual report in writing of each burning pile shall be submitted to the Bureau of Air Pollution Control. /sec. 1309.4/.

/d/ Open fires for recreational purposes shall be permitted. Open fires for disposing of rubbish shall be permitted where no rubbish collection service is available, provided it does not cause a nuisance. Other open fires may be permitted according to directives by the Director of the Health Department and approved by the Board of Health. No open fire causing air pollution shall be permitted. /sec. 1309.4/.

8. No person shall cause or permit the handling, transporting, or disposition of any substance or material which may be scattered by the wind, without taking reasonable precautions to minimize atmospheric pollution. No person shall operate or maintain any premise, open area, right of way, storage pile of materials, or vehicle, or construction, alteration, or wrecking operation, or any enterprise which involves any substance susceptible to being wind-borne, or any parking lot, or automobile and/or truck sales lot, or use any roadway without taking reasonable precautions to minimize air pollution. /sec. 1305.10/.

9. No person shall cause, suffer, or allow the emission from any source of air-borne radioactive material in concentration above the radioactive background concentration in the atmosphere at the site, without first having applied, in writing, to the Director of the Department of Health for a permit to cause such emission. Approval by the Director shall be contingent upon satisfaction by the proposal of the requirements in the Commonwealth of Pennsylvania Department of Health Regulation 433, as amended October 20, 1956. Upon approval of said application, a permit shall be issued by the Director. /sec. 1305.11/.

V. Enforcement

A. Nuisance

No person shall cause, suffer, or allow air pollutants to escape to the open air in such amounts as to be a nuisance to any person or the public. The Director of the Health Department shall determine when a nuisance exists and shall notify the person responsible. The notice shall include the reasons for its issuance, specify a reasonable time for the performance of any acts it requires, and inform the person responsible of his right to a hearing. /secs. 1312 and 1313/.

B. Emergency

1. Whenever the Director of the Health Department

determines that an emergency exists which necessitates immediate action to protect the public health, safety, or welfare, he shall issue a written order without prior notice requiring action that he deems advisable. The order shall be effective upon service. /sec. 1315/.

2. If the Board of County Commissioners finds that the established channels of trade cannot provide a sufficient supply of solid fuel for hand-fired equipment to permit a free and easy flow at prices commensurate to its value when related to other available supplies, the Board may declare an emergency during which the provisions of the Rules and Regulations with regard to solid fuel for hand-fired equipment shall be suspended. /sec. 1317.1/.

3. In the event of a national emergency or state of war, the Board of County Commissioners may adopt a resolution suspending these Rules and Regulations in whole or in part. /sec. 1317.2/.

C. Duties and Inspections

No person shall interfere or attempt to interfere with the Director of the Health Department or his representative in the performance of any duty herein enjoined, or, after proper identification, refuse him entrance to any place, except a building designed for and used exclusively as a private residence, for the purpose of enforcing these Rules and Regulations. /sec. 1316.1/.

D. Sealing

After any owner of any premise has been previously notified of a violation by specific fuel-burning equipment of any provision of these Rules and Regulations within any 12-month period, the owner shall be notified to show cause before the Director of the Health Department on a day certain within ten days of such notice why such equipment should not be sealed. If, upon the hearing, the Director finds that means or installations have been employed which produced air pollution and which are contrary to any provisions of these Rules and Regulations, he shall order such equipment to be sealed until adequate action, approved by the Bureau of Air Pollution Control, is taken to comply with the provisions of these Rules and Regulations. Such action may be in addition to administrative proceedings, fines and penalties herein provided. No seal on any fuel-burning equipment or premise shall be removed without written permission from the Director. /secs. 1305.6 and 1305.7/.

E. Testing

When the Director of the Department of Health has cause to believe that emissions from any fuel-burning equipment violate IV-B, 2, he shall notify the owner of the equipment within ten to 20 days from the date of notification. If, upon the hearing, the Director determines that there is reasonable cause to believe the emissions violate IV-B, 2, the Director may require the owner to make tests to determine whether the equipment is operating within the limitations of IV-B, 2. The determination of the Director is subject to appeal in accordance with Article XI of the County Rules and Regulations. Tests shall be according to the A.S.M.E. Test Code. If the results of the tests indicate no violation of IV-V, 2, such equipment shall not be subject to repeated tests for three years unless a change of process or condition has occurred. These provisions do not prevent the Director from making such tests as he deems necessary to enforce these Rules and Regulations. /sec. 1305.8/.

F. Variances

Where fuel-burning equipment has been equipped with air pollution control devices which complied with particulate matter emission limitations of prior ordinances or rules and regulations, and where such equipment does not operate within the particulate matter emission limitations of these Rules and Regulations, then a program to improve or replace the operations of said equipment shall be recommended by the Advisory Committee to the Board of Health. After a program has been approved by the Board of Health, the owner of the equipment shall not be in violation of these Rules and Regulations so long as said program is complied with. Reports indicating the progress of these programs shall be submitted annually by the Advisory Committee to the Board of Health. /sec. 1305.9/.

G. Procedure

Hearings and appeals shall be held according to Article XI, Hearing and Appeals of the Rules and Regulations of the County Health Department. /sec. 1314/.

H. Penalties

Any person convicted of violating any provision of these Rules and Regulations before an alderman or justice of the peace shall pay a fine of $25 to $100 for each offense, and in default of which shall be imprisoned for 30 days. /sec. 1316/.

VI. Preventive Programs

A. Permits

1. No person shall construct, install, alter or operate any incinerator, or any fuel-burning equipment rated at 200,000 B.T.U. per hr. or more, or any equipment pertaining thereto for use within the County until an application, including plans and specifications and such other information as the Bureau of Air Pollution Control may request, and an installation permit shall have been issued by the Director of the Board of Health. If, upon inspection of the completed installation, it is found the work is in conformity with the application, plans and specifications, the Director shall issue an Operating Permit. The Director shall seal any equipment for which an application for permit has not been made. No permit is required for domestic heating plants. Plans and specifications need not be submitted for equipment used in a secret process. An affidavit that the equipment is to be so used and that atmospheric pollution will be controlled shall be filed with the application in place of plans and specifications. /secs. 1310.2 and 1310.3/.

2. The Director of Air Pollution Control may exempt a pilot plant or experimental process from the provisions of IV-B, 1 and 2 for such a limited period of time as is necessary to complete the experiment. /sec. 1310.4/.

3. Plans and specifications shall conform to the following requirements:

a. Plans shall show the arrangement, location, and size of all fuel-burning equipment, including fresh air supply ducts, piping, valves, breeching, stacks, and chimneys, and shall show cross-sections of the fuel-burning equipment and construction details thereof.

b. Separate specifications shall be filed with each set of plans.

c. Specifications shall clearly show the means for the control of the emission of smoke, soot, fly ash, and products of combustion and the extent of such control. The specifications shall include a statement showing the calculated heating, power, process, or other loads on, and the capacity of, the fuel-burning equipment, and the type and quality of fuel to be used. /sec. 1310.6/.

4. If any installation does not conform to the issued installation permit, the Director of Air Pollution Control is authorized to stop all work until the Director is assured that the violation will be corrected. /sec. 1310.7/.

5. Replacing parts or maintenance work on fuel-burning equipment which does not change capacity or adversely affect the emission of air pollutants may be performed without an installation permit. /sec. 1310.8/.

6. Fuel-burning equipment, except domestic equipment, shall be periodically inspected by the Bureau of Air Pollution Control. If the equipment is in approved condition, an inspection certificate shall be issued. If the equipment is not approved, the responsible person shall be so notified with a direction to correct the condition within a certain date. Upon failure to comply with such notice, the Director of Air Pollution Control may seal the equipment until the condition is corrected. /sec. 1310.10/.

7. The owner of any fuel-burning equipment under the jurisdiction of this article shall report to the Bureau of Air Pollution Control within 30 days the permanent discontinuance or dismantlement of such equipment. /sec. 1310.12/.

8. Fees are charged for the issuance of installation and operating permits and for examination of applications therefor. /sec. 1310.14/.

B. Solid Fuel Dealers Licenses

1. No person shall sell, deliver, or distribute solid fuel for use in the County until he has applied for and obtained a solid fuel dealer's license from the Director of the Health Department. The person holding such license shall be responsible for any fuel transported in any of his vehicles. /sec. 1311.2/.

2. No person shall sell, deliver, or distribute, solid fuel for hand-fired equipment other than low volatile coal /including anthracite/, high-temperature coke, low-temperature coke, or equal quantities by weight of coal and high-temperature coke, coal and

low-temperature coke, or high-temperature coke and low-temperature coke; provided, however, that low volatile coal /including anthracite/ may be sold, delivered, or distributed for hand-fired equipment only under permit issued by the Director of the Health Department upon application or forms prescribed by the Director. Nothing contained in this section shall be construed to prevent other types of fuel, such as briquettes, charcoal, or wood, from being used in fireplaces or grills.

/a/ When solid fuel for hand-fired equipment consisting of two types of fuel is sold or delivered to a purchaser /user/, each vehicle making delivery shall contain equal quantities by weight of the two types of fuel. The vehicle shall have a partition separating each type of fuel from the other. When one of the fuels is coal, the coke shall be transported in the compartment next to the tail or end gate of the vehicle.

/b/ Fuel for mixes, as loaded on the vehicle by which delivery to the purchaser /user/ is to be made, shall be of a size that will pass over a screen having holes not less than one and one-half /1 1/2/ inches in diameter and through a screen having holes not more than eight inches in diameter. /sec. 1311.3/.

3. A dealer's license shall be displayed on the vehicle used. The Director of the Health Department or his representative, upon proper identification, may detain and inspect any vehicle, used on a public highway for the sale, delivery, or distribution of solid fuel, which vehicle is at a stop, and may examine the fuel and ascertain its destination by examination of the weigh slips or otherwise. /sec. 1311.4/.

4. Fees are charged for solid fuel dealers licenses. /sec. 1311.5/.

C. Towboat Registration

The person responsible for the operating of towboats in or through the County shall report yearly to the Bureau of Air Pollution Control, not later than January 15, the number of towboats operating as of the first of the said month, including information of: name of operator; name of towboat, either diesel or steam; horsepower capacity; and information in regard to fuel-burning equipment and auxiliaries. /sec. 1306.2 /c/ iii/.

VII. Miscellaneous

All persons responsible for the operation of blast furnaces, by-product coke plants, open hearth furnaces, electric furnaces, sintering plants, Bessemer Converters, and cupolas shall undertake or participate in a program of research to determine practical methods of further controlling the emission of air pollutants from such equipment. Reports of the progress of these research programs shall be submitted annually by the Advisory Committee with recommendations to the Board of Health. /secs. 1308.2 /P/, 1308.3 /C/, 1308.5 /e/ 1308.7 /c/, 1308.8 /c/ /.

ERIE, PA.

I. Ordinance

Bill No. 8619, February 27, 1951.

II. General Statement

This Ordinance regulates the emission of smoke, noxious odors or vapors or any other matter from any chimney, smoke stack or any other source within the City; prohibits the burning of rubbish or any other combustible materials and operating of outdoor incinerators at certain times, the burning of bonfires outside of private property lines; provides for control of operation of outdoor incinerators and open fires; prohibits the burning of garbage in bonfires; creates a Bureau of Smoke Abatement, Appeal and a Civic Smoke Abatement Board; provides for the preparation of Rules and Regulations by said Board, subject to the approval thereof by the Director of the Department of Public Safety; provides for the appointment of a Chief of the Bureau of Smoke Abatement and necessary assistants; and provides a penalty for the violation of the provisions of this Ordinance. "Corporations" is defined to include all public bodies corporate.

III. Administrative Organization

A. Bureau of Smoke Abatement, administered by the Chief of the Bureau of Smoke Abatement who is to be appointed by the Director of the Department of Public Safety, is charged with enforcement of this Ordinance. /Art. 2/.

B. Civic Smoke Abatement Board, to be appointed by the City Council, shall act as advisor to the Chief of the Bureau. /Art. 3/.

IV. Applicability

A. Sources /See IV B/.

B. Specific Pollutants

1. No person or corporation shall cause to be emitted into the open air from any fuel-burning equipment, internal combustion engine, vehicle, stack, premises, or open fire, smoke, the shade or appearance of which is equal to or greater than No. 2 Ringelmann excepting smoke, the shade or appearance of which is not greater than No. 3 Ringelmann for a period or periods aggregating 2 minutes in any 15 minutes, and smoke the shade or appearance of which is equal to or greater than No. 3 for a period or periods aggregating 5 minutes in any

15 minutes, when building a new fire or when breakdown of equipment occurs such as to make it evident that the emission was not reasonably preventable. /Art. 4, sec. 1/.

2. No person or corporation shall allow to be emitted into the open air, cinders, soot, dust, obnoxious gases, deleterious vapors, fumes or odors in quantities detrimental to the general health, safety and welfare of the public, or injurious to property. The Chief of the Bureau shall have the authority to determine in each case, according to accepted tests, whether or not the emission constitutes a nuisance and if so, to abate the same. /Art. 4, sec. 3/.

3. It is unlawful to burn rubbish or any other combustible materials or to operate outdoor incinerators after dark of any day or at any time on Sundays or Mondays. It is also unlawful to burn bonfires outside of private property lines, or to use outdoor incinerators while in operation or any similar or open fires unguarded at any time. It is unlawful to burn garbage at any time in bonfires. /Art. 4, sec. 4/.

V. Enforcement

A. Abatement

In case of violations under IV B 1, and IV B 2, the Chief of the Bureau of Smoke Abatement shall give written notice to the violator, requiring the violator to determine such violation within a reasonable time. It is the duty of such violator to take immediate steps to comply with the provisions of the violation notice and to immediately give written notice to the Chief of the Bureau of Smoke Abatement of the intention to comply. The Chief of the Bureau of Smoke Abatement is empowered to extend the time within which the violation shall be terminated. If the violation still exists after the final expiration date or if after ten days from the date of the first notice the violator has failed to give written notice of intention to comply, the Chief of the Bureau of Smoke Abatement shall give a written notice to the violator to show cause before the Chief of the Bureau of Smoke Abatement not less than ten days from the date of notice, why the penalties of the Ordinance should not be invoked. Upon such hearing, if the Chief of the Bureau of Smoke Abatement decides that adequate corrective means and methods have not been employed to correct the cause of such condition, then it shall be his duty, after ten days following his said decision, to invoke the penalties provided for in this Ordinance. /Art. 4, sec. 5/.

B. Inspections

The Chief of the Bureau of Smoke Abatement and his assistants may enter and inspect any and all premises whenever a violation of this Ordinance is being or has been committed. It shall be unlawful for any person or corporation in any manner to hinder, or interfere or attempt to interfere with the Chief of the Bureau of Smoke Abatement or any of his employees in the performance of any duty enjoined, or refuse to permit such authorized persons to perform their duty by refusing them entrance to the premises upon identification at a reasonable time. /Art. 2, sec. 6/.

C. Procedure

Any person or corporation taking exception to any decision, ruling, regulation, act or order of the Chief of the Bureau of Smoke Abatement may appeal to the Appeal Board within ten days after receiving written notice of the decision, ruling, regulation, or order complained of, by filing a written notice of appeal with the Chief of the Bureau of Smoke Abatement. The Chief of the Bureau of Smoke Abatement shall furnish to the Appeal Board all papers relating to the issue complained of. The Appeal Board shall set a hearing date within five to thirty days of the date of the filing of the appeal. Such appeal shall act as a stay of the order in question until the decision of the Appeal Board is rendered. The Appeal Board shall render a decision within ten days after the hearing. /Art. 5/.

D. Penalty

Any person or corporation violating any of the provisions of this Ordinance, shall, for each violation, upon conviction thereof be subject to a fine of between $25.00 and $300.00, with costs, recoverable before the Mayor or any Alderman of the city, and upon default of payment of the penalty and costs, the person or persons convicted may be imprisoned not exceeding thirty days.

VI. Preventive Programs

None.

HARRISBURG, PA.

I. Ordinance

Ordinance No. 78 January 3, 1921
and
Public Health Code, Article 1123, sec. 1123.11.

II. General Statement

An ordinance defining dense and unnecessary smoke, fuel combustion apparatus, etc.; creating the Bureau of Smoke Regulation and the office of Bureau Chief; regulating the emission of smoke, approval of plans for the construction, installation, reconstruction, extension, alteration or repair of fuel combustion apparatus and the issuance of permits therefor; providing penalties for violations.

III. Administrative Organization

Bureau of Smoke Regulation, attached to the Department of Public Safety, under supervision of a Bureau Chief, appointed by Council, whose duties shall be:

1. to make periodic observations of smoke density.
2. to send written notice of violations to the responsible operator requiring the abatement of the dense and unnecessary smoke. /sec. 7/.
3. to approve satisfactory plans and specifications and issue permits, and inspect work done thereunder.
4. to institute prosecutions for violations. /secs. 4, 5/.

IV. Applicability

A. Sources

Fuel combustion apparatus, defined as any apparatus or appliance used for the combustion of fuel in any manufacturing, light, heat, or power plant; schoolhouse, public building, office building, church, or business place; steam boat, steam roller, steam derrick, stationary or traction engine; hotel, apartment or tenement house; theater or amusement place; tar, pitch or asphalt kettle or similar places or devices.
Exempted - fuel combustion apparatus in buildings used for private residence purposes, except apartment and tenement houses containing over five apartments. /sec. 2/.

B. Specific Pollutants

Smoke: No responsible operator shall permit the emission of dense and unnecessary smoke, i.e., that of a density equal to or greater than No. 3 Ringelmann from any fuel combustion apparatus for any period or periods of time aggregating two minutes in a period of fifteen minutes; provided that in the case of stationary plants during the period of building a new fire, dense and unnecessary smoke may be permitted for a period not exceeding twenty consecutive minutes during any one day. /sec. 6/.

C. "Causing or allowing black smoke, cinders, dust, gas, fumes, steam or any offensive odors to escape or to be discharged from any building to the annoyance or detriment of any person not employed therein is prohibited". /Codified Ordinances of the City of Harrisburg, Public Health Code, Article 1123, sec. 1123.11/.

V. Enforcement

A. Nuisance abatement - see III-2 above.

B. Unlawful Conduct

1. To deny admittance to officials of the Bureau acting under their right of entry to premises at reasonable hours for purposes of enforcing this ordinance. /sec. 12/.

2. To obstruct or hinder the Bureau Chief or his assistants in performing their duties under this ordinance. /sec. 13/.

3. To carry on work not in conformity with the permit issued therefor after notice to that effect has been given by the Bureau Chief. /sec. 10/.

C. Penalties

Upon conviction of a violation hereof before the mayor or any alderman of the city, the violator shall be sentenced to pay a fine of not more than $100 and costs for each violation. Each day's violation is a separate offense. In default of payment of the fine and costs, the defendant shall be sentenced to jail for a period not exceeding 90 days. /sec. 14/.

VI. Preventive Programs

Permits shall be required for the construction, installation, reconstruction, extension, alteration or repair of any fuel combustion apparatus. Plans and specifications shall be submitted with the application, which shall be granted or refused within 10 days of filing. Upon approval thereof, a permit shall be issued setting forth the conditions under which the apparatus may be operated.

Minor or emergency repairs which do not increase the capacity of the apparatus, alter it substantially, or alter the method or efficiency of smoke prevention are exempted from this requirement. /sec. 8/. The Bureau Chief shall have the authority to revoke the permit by giving written notice if any work carried on is not in conformity with its terms. /sec. 10/.

PHILADELPHIA, PA.

I. Ordinance

Air Pollution Control Ordinance of March 9, 1954, and Regulations of the Air Pollution Control Board, May 24, 1954.

II. General Statement

The Ordinance controls and regulates air pollution; defines the powers and duties of the Department of Public Health, the Department of Licenses and Inspections and of the Air Pollution Control Board; prescribes fees for permits; and provides for administration and enforcement and penalties.

"Air pollution" is defined as the emission or escape of dust, fumes, gas, mist, odor, smoke, vapor, or any combination thereof, in a quantity and of a character which constitutes a direct health hazard or is detrimental to health, comfort, living conditions, welfare and safety of the inhabitants of the City.

"Person" is defined as including any governmental unit, agency to which the City has the power to legislate.

III. Administrative Organization

A. Department of Public Health has the duties of enforcing this Ordinance and the regulations and of examining applications for permits. /Ordinance sec. 5/.

B. Department of Licenses and Inspections has the duty to make recommendations to the Department of Public Health on applications for permits and to issue such permits as the Department of Public Health may approve. /Ordinance sec. 6/.

C. Air Pollution Control Board shall have the duty to make regulations to implement the Ordinance; shall hear and review objections to any action or decision of the Department of Public Health; and to recommend correction of violations. /Ordinance sec. 7/.

IV. Applicability

A. Sources

1. Boilers may not be left unattended at any time unless such boiler is equipped with a smoke alarm. Boilers having more than 240 sq. ft. of heating surface must have mechanical means as opposed to manual fire. There must be an adequate air supply

to a boiler at all times of operation. /Rules and Regulations sec. 5A /a/ /.

2. Dust collectors may be required on any equipment. New spreader stoker in pulverized fuel installations which may result in violations of this Ordinance must be equipped with dust collecting equipment. A regular inspection schedule for dust collectors may be required to be set up by owners or operators. /Rules and Regulations sec. 5A /b/ /.

3. Where violations result solely from improper fuel for particular equipment the owner or operator may be required to use a smoke free fuel proper for such equipment. /Rules and Regulations sec. 5A /c/ /.

4. Incinerators - All new incinerators or crematories shall be equipped with adequate auxiliary heat sources or other approved means to prevent air pollution. It may be required that existing incinerators or crematories be equipped with auxiliary heat sources. Incinerators in multiple dwellings without approved means to prevent air pollution may not be operated except between hours of 7:00 A.M. to 5:00 P.M. It may be required that each industrial, commercial, three family or more incinerator be equipped with a suitable screen over any outlet. Exit gas velocity on incinerator stacks may be subject to regulation. Incinerators may not be vented into other stacks without special approval. /Rules and Regulations sec. 5A /d/ /.

5. Laundries and dry cleaning plants must comply with the following provisions: effective lint filters on all dryers, vent pipes carrying solvent vapors are not to be directed toward any building openings within twenty feet; emissions which constitute repeated violations may require additional equipment to insure adequate control. /Rules and Regulations sec. 5A /e/ /.

6. Emissions which interfere with the use of public facilities or highways are violations. /Rules and Regulations sec. 5A /f/ /.

7. No garbage, refuse, waste material, shall be burned in an open fire. This does not apply to open burning of domestic refuse by occupants of any building used for dwelling containing less than three units. Such permissible burning shall not be commenced before sunrise or two hours previous to sunset or on any foggy or rainy day. Such fire shall be completely extinguished by one hour after sunset. If the Health

Commissioner finds that accumulation of waste constitutes a menace to public health and cannot be adequately and safely disposed of in any manner other than by burning in open fires, he may authorize the open burning of such waste. /Rules and Regulations sec. 5A /g/ /.

8. Open coking fires causing air pollution are not permissible. Paint spraying operations involving air pollution shall be provided with suitable controls. /Rules and Regulations sec. 5A /h/ /.

9. Rendering plants must be equipped with effective devices to prevent emission of odors causing air pollution. /Rules and Regulations sec. 5A /j/ /.

10. No persons shall conduct sand blasting without approved control devices to prevent excessive sand dispersal. /Rules and Regulations sec. 5A /k/ /.

11. Where there is evidence that a plant is committing violations, the Air Pollution Control Section may require the installation of effective smoke indicating and recording devices. /Rules and Regulations sec. 5A /l/ /.

12. Stacks and outlets which cause nuisance to adjoining property may be required to be raised enough to reduce the nuisance. /Rules and Regulations sec. 5A /m/ /.

13. No tar or asphalt kettle shall be used with an open fire to supply heat. /Rules and Regulations sec. 5A /n/ /.

14. No motor vehicle shall emit visible fumes or vapors, other than water in any form, while stationary or while in motion, except for the first one hundred yards after starting. Persons maintaining commercial vehicles must make periodical visual and odor tests. /Rules and Regulations sec. 5A /r/ /.

B. Specific Pollutants

1. No person may cause, suffer or allow to be emitted dust, fumes, gas, mist, odor, smoke, vapor, or any combination thereof from any source which constitutes air pollution or an air pollution nuisance or which is denser than No. 2 Ringelmann for more than two minutes in any 15 minutes, or for more than three such two minute periods in one day. This is subject to the exceptions that: when building a new fire, adjusting new equipment, a breakdown of equipment occurs, or in the operation of mobile equipment, an

initial startup allowance of ten minutes in 60 minutes of emissions not denser than No. 2 Ringelmann, and when soot blowing in excess of No. 2 Ringelmann may be permitted for not more than a reasonable time agreed to by the Air Pollution Control Section. /Rules and Regulations sec. 4A /a/ /.

2. Dust, fumes or smoke discharged into the open air from any fuel fired combustion process shall not: /1/ exceed .85 pounds per 1,000 pounds of gases adjusted to 12 percent carbon dioxide content; or /2/ create air pollution or an air pollution nuisance. /Rules and Regulations sec. 4A /b/ /.

V. Enforcement

A. Abatement

Upon any violation of the provisions of these Rules and Regulations or Ordinance, the City may apply to the Court of Common Pleas for injunctive relief. This is deemed concurrent and cumulative with any penalty herein provided. /Ordinance sec. 10 /b/ and 10 /c/ /.

B. Unlawful Conduct

A person who refuses to comply with this Ordinance or interferes or attempts to interfere with the personnel of the Department of Public Health, the Department of Licenses and Inspections, or the Air Pollution Control Board in the performance of any duty or refuses to permit such personnel entrance at reasonable hours to any premises upon proper identification or a presentation of a written order of the Commissioner of the Department of Public Health, the Commissioner of the Department of Licenses and Inspections, or the members of the Air Pollution Control Board, for the investigation of the premises to determine compliance with this Ordinance and the regulations promulgated thereunder, shall be subject to all the penalties set forth in this Ordinance.

Any investigator entering a plant in the course of his investigation shall comply with all safety regulations in effect on such premises. /Ordinance sec. 9/.

C. Penalty

Persons who violate any of these provisions may be fined $10.00 to $300.00 and imprisoned not more than 30 days if said fine and cost is not paid within ten days from the date of imposition. Violations on separate days are separate violations. /Ordinance sec. 10/.

VI. Preventive Programs

A. Installation Permits

1. Any person desiring to construct, add to or alter any device or appurtenances thereto that produces, controls, causes or may cause air pollution shall secure a permit therefor from the Department of Licenses and Inspections.

2. Any applicant for such permit shall submit plans and specifications of work to be done concerning air pollution and other information requested by the Department of Licenses and Inspections to such Department.

3. A separate permit shall be obtained for each complete unit of boiler or fuel burning equipment. Heating boiler, warm air furnace, or water heater with integral burner, oil burner or stoker require only one permit for the combined unit.

4. If any installation is not begun within one year from the issuance of a permit therefor, the permit shall be null and void and any fee paid is forfeited.

5. Issuance of a permit does not exempt anyone from prosecution under this Ordinance if operation of the device results in air pollution.

6. The provisions of this permit do not apply to household appliances, motor vehicles or other equipment used on highways, or to any structures containing less than three dwelling units. /Ordinance sec. 4/.

7. Fees are charged for permits and are based on B.T.U. per hour rating and the type of installation. /Ordinance sec. 8/.

B. Approval of Permits

In determining the requirements of the approval of permits the following rules shall govern:

1. Minimum furnace dimensions of power boilers shall be, in the case of stoker fired units, those recommended by the Stoker Manufacturers Association Technical Manual /1947, second edition/. Conversion units /units converted to stoker firing/ must not exceed a heat release of 45,000 British thermal units per cubic foot of furnace volume.

2. Net load shall mean all radiation used for heating purposes exclusive and piping reduced to the equivalent of direct cast iron radiators in a temperature of 70 degrees F., which for this purpose shall be calculated on the basis for steam of 240 British Thermal Units per square foot per hour, and on the basis of 150 B.T.U. per sq. ft. per hour for water, plus equivalent radiation for heating water for domestic purposes. "Net load" for warm air furnaces shall be taken as bonnet rating.

3. On new installations, the "net load" rating for a heating boiler shall not be less than the estimated design load which shall include any equivalent radiation for heating water for domestic purposes.

4. The net load rating of all cast iron heating boilers shall be the "net load" capacity as published by the Heating, Piping and Air Conditioning Contractors National Association as "net load" recommendations for heating boilers /July, 1953/.

5. For cast iron boilers not rated by the "IBR" code, the net sq. ft. radiation load, recommended for low pressure heating boilers shall be computed from Heating, Piping and Air Conditioning Contractors National Association Engineering Standards /1948/.

6. "Net load" rating of all-steel boilers shall be in accordance with the Steel Boiler Institute Rating Code /January, 1948/.

7. The "net load" rating of heating boilers and warm air furnaces designed for gas firing as a unit, would be gas burner and integral part of the unit, shall be the "net load" rating recommended by the Directory, Approved Appliances and Listed Accessories, of the American Gas Association /January, 1954/.

8. The design and dimensions of industrial, commercial, three family or more incinerators, or crematories, and their associated vents or stacks, in so far as air pollution is concerned, shall be submitted to the Air Pollution Control Section for their approval, modification or disapproval within a reasonable time.

9. Detailed description and drawings of any furnace showing purpose, design, dimensions, combustion space, amount and kind of fuel, and other necessary details in so far as air pollution is concerned shall be submitted to the Air Pollution Control

Section for their approval, modification or disapproval within a reasonable length of time.

10. In the case of a permit for a secret process which may give rise to an emission causing air pollution, a sworn affidavit is required. The affidavit must justify reasons for secrecy and give a guarantee that the effluents do not violate the Ordinance. Supplemented by test results where possible.

11. In the case of specially designed equipment, details must be submitted to the Air Pollution Control Section, and their approval or disapproval of a permit will be determined according to the individual design. /Rules and Regulations sec. 3A/.

C. Education of Public

1. The Air Pollution Control Section shall maintain and provide as much current scientific literature on the subject of air pollution as is practicable in its office during regular working hours.

2. The Air Pollution Control Section shall be prepared to assist citizens and institutions of the City in every way practicable with their air pollution problems.

3. The Air Pollution Control Section shall at all times keep abreast of all new developments in the field of Air Pollution Control. /Rules and Regulations secs. 1A /f/ through 1A /i/ /.

READING, PA.

I. Ordinance

Bill No. 7, an Ordinance, July 26, 1961.

II. General Statement

An ordinance to prevent the emission of dense smoke, cinders, dust, fly ash, noxious acids, fumes and gases by prescribing standards and providing penalties for violations.

III. Administrative Organization

A. Health Officer of the Bureau of Health whose powers and duties shall include: /sec. 5/.

1. Investigation of complaints and institution of necessary proceedings in case of violations.
2. Recommending to City Council needed revisions of this or any other ordinance pertaining to air pollution.
3. Making regular inspections of all fuel-consuming devices.
4. Publishing rules and regulations for the administration of this ordinance.
5. Notifying all parties concerned of any decision he may render.

IV. Applicability

A. Specific Pollutants

1. Smoke of a density equal to or greater than No. 2 Ringelmann observed at a distance of not less than 100 feet nor more than 1/4 mile is prohibited, except for periods of not more than 6 minutes in any 60 minutes when a firebox, furnace, boiler, locomotive or other device is being cleaned out and a new fire is being built therein. Not applicable to private residences in which no more than 2 families are or can be housed. /secs. 2, 3/.
2. Escape of soot, cinders, noxious acids, fumes and gases in such quantity as to be detrimental to or to endanger any person or the public, or to cause injury or damage to property or business, is declared a nuisance. /sec. 4/.

V. Enforcement

A. Nuisance

Emissions prohibited by IV A 1 above, may be summarily abated by the Health Officer or his agent /sec. 2/. Emissions prohibited by IV A 2 above may be summarily abated after they are declared to be a nuisance by the Council sitting as a Board of Health, following complaint and hearing. /sec. 4/.

B. Unlawful Conduct

To interfere with the performance of duty of the Health Officer, his employees and representatives. /sec. 7/.

C. Procedure

Appeals from any ruling of the Health Officer may be taken to the City Board of Health within 10 days. Appropriate hearings shall be held after due notice to all parties.

D. Penalties

Violations shall be punishable by a fine not to exceed $100, or imprisonment for not more than 30 days. Each day's violation is deemed a separate offense.

VI. Preventive Programs

None.

WILKES-BARRE, PA.

I. Ordinance

File of Council No. 1 of 1959.

II. General Statement

An ordinance to control smoke emission and reduce air pollution caused by excessive soot, cinders, fly ash, dust, noxious acids, fumes and gases by establishing permissible standards of emission and fuel volatility, and providing for annual inspections and the imposition of penalties.

III. Administrative Organization

Bureau of Smoke Prevention within the Department of Health, headed by the Director of Smoke Prevention who will be the principal health officer of the City. His duties shall be:

1. To investigate complaints and institute proceedings in case of violations.
2. To investigate and make recommendations to the city council respecting needed revisions of ordinances pertaining to air pollution.
3. To make yearly inspections of all fuel consuming devices where nuisances are apt to be created.
4. To cooperate with other organizations interested in the smoke prevention campaign.
5. To promulgate and publish rules and regulations for the administration of this ordinance after a thorough consideration of the problem. /secs. 5, 6/.

IV. Applicability

A. Sources /see IV B/.

B. Specific Pollutants

1. Smoke of a density equal to or greater than No. 2 Ringelmann shall not be emitted from any source whatever; except

/a/ Private residences in which no more than 2 families are or can be housed are exempted from the provisions of this ordinance.

/b/ Smoke of a density greater than No. 2 Ringelmann shall be permitted for a period not to exceed 6 minutes in any single period of 60 minutes when a fire box, furnace, boiler, locomotive or other fuel consuming device is being cleaned out and a new fire is being built therein. /secs. 2, 3/.

2. Soot, cinders, noxious acids, fumes and gases shall not be emitted in such quantity, place or manner as to be detrimental to any person or to the public or to endanger the health, comfort and safety of any such person or of the public, or in such manner as to cause or have a tendency to cause injury or damage to property or business. The escape of such matter is declared to be a public nuisance and may be summarily abated by the Director. /sec. 4/.

C. Volatility

Smokeless fuel is defined as fuel the volatile content of which is 20 percent or less on a dry basis; or any fuel of greater volatile content which meets the same standards in regard to smoke production. The use of any other fuel in any fuel burning equipment shall be unlawful and it shall be unlawful to use any fuel which will create a smoke nuisance. /sec. 7/.

V. Enforcement

A. Nuisance abatement /see IV B 2/.

B. Unlawful conduct

To interfere with or impede the performance of duty of the Director or his representatives shall be a misdemeanor. /sec. 9/.

C. Inspection

Shall be made annually by the Director of such fuel consuming devices in operation within the City where nuisances are apt to be created. A certificate of inspection authorizing the continued operation of such devices shall be issued provided they meet the standards established herein. Failure to possess a proper certificate of inspection shall be considered a violation of this ordinance. /sec. 8/.

D. Period of Grace

Whenever it has been adequately demonstrated to the Director that compliance with the terms hereof cannot be effectively and immediately made, the Director shall have the authority to grant a temporary permit for the continued operation of such non-complying equipment, but only in the event that the party has taken all necessary steps to secure compliance. Such temporary permit shall be issued for no longer a period than six months. /sec. 10/.

E. Penalties

Any violator, on conviction in a summary proceeding before the Mayor or any City Alderman, shall be sentenced to pay a fine of not less than $25 nor more than $300, and costs, and in default of the payment thereof, be imprisoned for a period not exceeding 90 days. Each day's violation is deemed a separate offense.

WILLIAMSPORT, PA.

I. Ordinance

City Council Bill No. 2673, August 6, 1957.

II. General Statement

An ordinance regulating and controlling the emission of smoke and soot into the open air by establishing standards and providing penalties for violations.

III. Administrative Organization

A. Smoke Control Engineer, in the Department of Public Safety, appointed by the Director of the Department with the consent of Council to enforce the terms of this ordinance. /sec. 4/.

B. Smoke Control Board of not more than 5 members appointed by the Mayor with consent of Council to pass upon reports of alleged violations, hold appropriate hearings thereon, and issue appropriate orders for the abatement thereof; to submit to Council recommendations for any advisable revisions of this Ordinance. /secs. 5, 6/.

IV. Applicability

A. Sources

All fuel-burning equipment, defined as "furnaces, incinerators, refuse-burning equipment, boilers, steam locomotives, and stacks, structures, apparatus, devices or mechanisms used in the process of burning fuel or combustible materials." /secs. 1, 2, 3/.

B. Specific Pollutants

Smoke of a density equal to or greater than No. 2 Ringelmann is designated "dense and, except for one minute in any 30-minute period, may not be emitted except as follows: /secs. 2, 3/.

1. While building new fires, cleaning, reversing gas producer cycles, or during breakdowns, the smoke may be equal to No. 2 Ringelmann for 3 minutes in any 15-minute period, and greater than No. 2 Ringelmann for 2 minutes in any 15-minute period.

2. During the building of a new fire in any steam locomotive, smoke may be:

/a/ Equal to No. 2 Ringelmann for 3 minutes in any 15-minute period.

/b/ Greater than No. 2 Ringelmann for 3 minutes, of which no period shall exceed 2 continuous minutes, in any 15-minute period of the first 30 minutes of a new fire.

/c/ Greater than No. 2 Ringelmann for any 2 minutes to any 15-minute period of the second 30 minutes of such new fire.

V. Enforcement

A. Unlawful Conduct

To interfere with the Smoke Control Engineer in the performance of duty, or to refuse him or any member of the Smoke Control Board the right to inspect any premises at reasonable hours for the purpose of enforcing this Ordinance. /sec. 8/.

B. Period of Grace

The Smoke Control Board may grant a temporary permit, not to exceed 6 months duration, for the continued operation of non-complying equipment when the necessity therefor is shown by due application, hearing and proof. The period may be extended for cause, for not more than 3 months at any one time. /sec. 7/.

C. Procedure

Violations shall be reported by the Smoke Control Engineer to the Smoke Control Board which shall notify the violator to show cause, on at least 10 days notice, why an abatement order should not be issued. /sec. 6/.

D. Penalty

Failure to comply within the specified time or extension shall subject the violator to a fine of not less than $10 nor more than $100, or up to 90 days in jail, with penalties recoverable in a civil action. Each day's violation is a separate offense. /sec. 10/.

VI. Preventive Programs

None.

EAST PROVIDENCE, R. I.

I. Ordinance

Ordinance dated June 1, 1956.

II. General Statement

An ordinance to control air pollution by establishing permissible standards of smoke emission, requiring the registration of equipment, installation permits, annual inspection, reports of the sale or lease of fuel-burning equipment, and imposing penalties for its violation. Government corporations, departments, bureaus and agencies come within its purview.

III. Administrative Organization

A. Division of Air Pollution Regulation, within the Office of Inspector of Buildings, headed by a Plumbing Inspector whose duties include: /secs. 2, 3, 4/.

1. Administration of the Division
2. Enforcement of this Ordinance, its rules and regulations
3. Promulgating rules and regulations
4. Investigating complaints, making routine inspections and observations
5. Issuing permits and notices
6. Annual or periodic inspection of equipment
7. Publishing and disseminating air pollution information
8. Enlisting the cooperation of civic, technical, scientific and educational societies.

B. Advisory Board of 5 members, appointed by the President of the Town Council, whose duties include: /secs. 2, 3, 4/.

1. Holding public hearings on all proposed rules and regulations before giving their approval thereto. All interested parties shall be given notice of the hearing by newspaper publication, and may be heard thereat on the matter under consideration.
2. Acting as advisor to the Plumbing Inspector.

C. Appeal Board of 5 members appointed by the President of the Town Council, from time to time as needed, to act as advisor to the Plumbing Inspector.

IV. Applicability

A. Sources

Fuel-burning equipment, internal combustion engines, premises, open fires, railroad locomotives or vehicles, and stacks.

B. Specific Pollutants /sec. 8/.

1. Smoke

/a/ From fuel-burning equipment, internal combustion engines, premises or open fire, excepting railroad locomotives or vehicles, residential outdoor fireplaces or vehicles, no smoke shall be emitted the density of which is equal to No. 2 Ringelmann for a period aggregating 8 minutes or more in any 30 minutes, or the density of which is greater than No. 2 Ringelmann except for periods aggregating 3 minutes in any 15 minutes when building a new fire, cleaning a fire or when a breakdown occasions an unpreventable emission.

/b/ From a railroad locomotive or vehicle, no smoke shall be emitted the density of which is equal to No. 2 Ringelmann for a period aggregating 8 minutes or more in any 30 minutes, or the density of which is greater than No. 2 Ringelmann except for periods aggregating 30 seconds in any 2 1/2 minutes, when building a new fire, cleaning a fire, or when a breakdown occasions an unpreventable emission.

2. Dust may not be discharged from any fuel-burning equipment or premises in excess of 0.85 per 1000 lb. of gases, adjusted to 12 percent CO2 content for products of combustion, to be determined according to the A.S.M.E. Test Code.

3. Dense smoke, cinders, dust, gas, steam or noisome odors that are a detriment to the property of others or are a nuisance to any person shall not be discharged from any fuel-burning equipment, internal combustion engine, railroad locomotive, motor vehicle, premises, open fire, stacks, place or premises.

V. Enforcement

A. Unlawful conduct

1. Failure to file the reports required in C below, or making any false statement in connection therewith. /sec. 9/.

2. Hindering the Plumbing Inspector or his agents in the enforcement of this ordinance, or refusing them entry to premises at reasonable hours. /sec. 10/.

B. Inspection /sec. 6/.

1. The Plumbing Inspector shall inspect all fuel-burning equipment annually, or oftener if there is reason to believe this ordinance is being violated.

2. If a violation is disclosed by any inspection, the Plumbing Inspector shall give written notice of the defect to the person in charge, with an order to correct it within 30 days. Failure to comply shall be cause for the Plumbing Inspector to seal the equipment, and he may also commence criminal proceedings.

C. Record Keeping /sec. 9/.

All retailers of fuel-burning equipment shall report in writing to the Plumbing Inspector the sale or lease of every such piece of equipment for use within the city within 10 days of the transaction, listing the address at which the equipment is to be used.

D. Procedure /sec. 11/.

Appeals may be taken to the Board of Appeals by filing notice therewith within 10 days of the decision or order appealed from, specifying the grounds thereof and the relief sought. The appellant shall deposit $10 to cover the cost of hearing.

The Board shall set a date for the hearing not more than 10 nor less than 5 days from the date of filing. The appeal shall serve to stay the order appealed from. The applicant may appear in person or by agent or attorney. On affirmance, the deposit will be forfeited; on reversal or modification it will be refunded.

E. Penalties /sec. 13/.

Any person convicted of violating this ordinance shall be liable to a fine of not more than $100 for each day's violation.

VI. Preventive Programs

A. Registration of Equipment /sec. 5B/.

"No person shall operate any equipment /of the following
type:
1. fuel-burning equipment rated in excess of 300,000 BTU per hour, or
2. outlets passing in excess of 15,000 CFM, or
3. outlets direct to the atmosphere, from processing equipment, to include furnaces, ovens, reaction vessels, stills, dryers, etc., passing in excess of 5,000 CFM./

which was not in operation, the same type of equipment, in operation at the effective date of the ordinance, had to have been registered, and the Plumbing Inspector is authorized to solicit additional information concerning such equipment annually thereafter, /sec. 5A/ or had not been operated within 30 days of the effective date of this ordinance without first filing with the Plumbing Inspector a report in writing registering the equipment intending to be operated at least 15 days after acquiring said equipment or at least 15 days prior to operating said equipment. After registering the equipment to be operated as provided herein, the operator may, after installation, operate said equipment for a period of ten /10/ days without a permit to operate.

"At the end of ten /10/ days of operation of any equipment properly registered with the Plumbing Inspector, the Plumbing Inspector shall issue a permit to operate said equipment unless it pollutes the air or causes a nuisance in violation of this ordinance.

"In the event the Plumbing Inspector refuses to issue a permit or in the event that a period of ten /10/ days of operation is not a sufficient time for the equipment to be adjusted so that its operation will not be in violation of this ordinance, then the operator may within 48 hours of said refusal or within 48 hours following the termination of the ten /10/ day period, appeal to the Appeal Board from said refusal or for an extension of the ten /10/ day period within which said equipment may be operated without a permit. During the pendency of the appeal to the Appeal Board, the equipment may continue to be operated in the same manner as if a permit had been granted, provided, however, that if in the opinion of the Plumbing Inspector, the continuing operation of said equipment would cause a violation of the pollution or nuisance features of this ordinance, then the Plumbing Inspector shall have the right to request any three /3/ members of the Advisory Board to issue an order requiring the operator to cease operations of the equipment during the appeal period".

PAWTUCKET, R. I.

I. Ordinance

Chapter 744 6 September 1956

II. General Statement

An ordinance to control smoke and other pollutants by establishing permissible standards of smoke and dust emission, providing for the sealing of offending equipment, and subjecting violators to criminal prosecution. The definition of person includes government corporations, bureaus, departments and agencies.

III. Administrative Organization

A. Division of Air Pollution Control, within the Department of Public Health, under the direction of an Air Pollution Control Officer whose duties shall include:

1. investigating complaints and making routine inspections
2. issuing notices, and preparing rules and regulations
3. publishing and disseminating air pollution information
4. enlisting the cooperation of civic, technical, scientific and educational societies
5. instituting prosecution, in the name of the City, for violation of this ordinance. /secs. 3, 5, 7/.

B. Advisory Board of 5 members, appointed by the Mayor, whose duties shall include advising the Air Pollution Control Officer and recommending rules and regulations for final approval. No such approval shall be granted until the Board has held a public hearing, after general notice to all interested persons, at which time such persons may be heard. /secs. 4, 6, 7/.

C. Technical Engineer shall be appointed by the Mayor, from time to time as needed, to act as advisor to the Air Pollution Control Officer. /sec. 3/.

D. Board of Appeals of the City of Pawtucket shall review appeals from decisions of the Air Pollution Control Officer. /sec. 8/.

IV. Applicability

A. Sources

Fuel-burning equipment, internal combustion engines, premises, open fires, railroad locomotives or vehicles, stacks.

B. Specific Pollutants

1. Smoke /sec. 9/.

/a/ from fuel-burning equipment, internal combustion engines, premises or open fires except railroad locomotives or vehicles, residential outdoor fireplaces or vehicles, fuel-burning equipment consisting of 4 or more boilers served by one smokestack and being fired consecutively, no smoke shall be emitted the density of which is equal to No. 2 Ringelmann for a period aggregating 8 minutes or more in any 30 minutes, or the density of which is greater than No. 2 Ringelmann except for periods aggregating 3 minutes in any 15 minutes when building a new fire, cleaning a fire, or when an unpreventable breakdown occurs.

/b/ from any fuel-burning equipment consisting of 4 or more boilers served by one smokestack and being fired consecutively, no smoke shall be emitted of a density equal to No. 2 Ringelmann for a period aggregating 16 minutes or more in any 30 minutes, or of a density greater than No. 2 Ringelmann except for periods aggregating 6 minutes in any 15 minutes when building a new fire, cleaning a fire, or when an unpreventable breakdown occurs.

/c/ from any railroad locomotive or vehicle, no smoke shall be emitted of a density equal to No. 2 Ringelmann for a period aggregating 8 minutes or more in any 30 minutes, or of a density greater than No. 2 Ringelmann for periods aggregating 30 seconds in any 2 1/2 minutes, when building a new fire, cleaning a fire, or when an unpreventable breakdown occurs.

2. Dust may not be discharged from any fuel-burning equipment or premises in excess of 0.85 per 1000 lb. of gases, adjusted to 12 percent CO2 content for products of combustion, to be determined according to the A.S.M.E. Test Code. /sec. 10/.

3. Dense smoke, /equal to or greater than No. 2 Ringelmann/ cinders, dust, gas, steam or noisome odors that are a detriment to the property of others or are a nuisance to any person shall not be discharged from any fuel-burning equipment, internal combustion engine, railroad locomotive, motor vehicle, premises, open fire, stacks, place or premises. /sec. 10/.

V. Enforcement

A. Unlawful Conduct

1. To violate the seal on any equipment sealed at the direction of the Air Pollution Control Officer, unless authorized by him in writing to do so. /sec. 11/.

2. To hinder the Air Pollution Control Officer or his agents in the enforcement of this ordinance or refusing them entry to premises at reasonable hours. /sec. 13.

B. Sealing /sec. 11/.

If it is found on inspection, for which there was reasonable grounds, that fuel-burning equipment cannot be operated without causing a violation of this ordinance, the Air Pollution Control Officer shall notify the person in charge of the defects and order their correction within 30 days. Failure to comply with the order within the prescribed time shall be cause for the Air Pollution Control Officer to seal the equipment.

C. Procedure /sec. 12/

Appeals may be taken to the Board of Appeals by filing notice therewith within 10 days of the decision or order appealed from specifying the grounds thereof and the relief sought. The appellant shall deposit $10 to cover the cost of hearing.

The Board shall set a date for the hearing not more than 10 nor less than 5 days from the date of filing. The appeal shall serve to stay the order appealed from. The applicant may appear in person or by agent or attorney. On affirmance, the deposit will be forfeited; on reversal or modification it will be refunded.

D. Penalties /sec. 14/.

Any person convicted of violating the ordinance shall be liable to a fine of not more than $100 for each day's violation.

VI. Preventive Programs

None.

COLUMBIA, S. C.

I. Ordinance

Air Pollution Control Ordinance of the City of Columbia October 1, 1958.

II. General Statement

An ordinance to control air pollution, defined as "dust, fumes, smoke, soot, odors, gases, or other materials that are of such character as to create an unclean, destructive, offensive, or unhealthful condition, when emitted or allowed to escape into the air", by prescribing standards of measurements for fuel-burning equipment, prohibiting certain emissions, requiring installation permits and inspections, and providing penalties for violations. Government corporations, departments, bureaus and agencies are included within its purview. One family residences are outside the scope of its provisions.

III. Administrative Organization

A. Air Pollution Control Section, within the Building Division, in charge of the Air Pollution Control Officer. /sec. 102.1/. His powers and duties shall include enforcement of this ordinance, with right of entry to premises /sec. 103.1/, and the power to revoke permits in the event a false statement or material misrepresentation has been made. /sec. 103.3/.

B. Air Pollution Control Advisory Board of 5 members appointed by City Council to advise on and approve the promulgation of rules and regulations by the Air Pollution Control Officer. /secs. 108.1, 108.6/.

C. Air Pollution Control Appeals Board of 5 members appointed by City Council to review decisions of the Air Pollution Control Officer and to grant variances and modifications when they are warranted. /secs. 109, 110, 111/.

IV. Applicability

A. Sources

1. Smoke Indicators

"All newly constructed or reconstructed solid or liquid fuel-burning plants having more than 300 square feet of boiler surface /30 H.P./ or its equivalent, shall be equipped with smoke indicators, mirrors, or similar devices, approved by the Air Pollution Control Officer to enable the fireman to observe the top of his stack or stacks from the boiler room at all times, unless the top of the stack is readily visible to the fireman from the boiler room without the use of such devices. In plants where a fireman is not in constant attendance in the boiler room, the smoke indicator shall be of a type which will sound an alarm, or flash a signal, to attract the attention of the fireman. Any existing plant which emits unlawful smoke may be required to install such indicating devices." /sec. 303/.

B. Specific Pollutants

1. Smoke

Density not to exceed No. 2 Ringelmann for more than 6 minutes in any 30 minutes; but when building a fire, cleaning a fire, or during a breakdown, the density may be equal to but not greater than No. 3 Ringelmann for 6 minutes in any 30 minutes. /sec. 301/.

2. Railroad Roundhouses, Locomotives and Other Vehicles /sec. 302/.

/a/ All railroad roundhouses or fire-building stations shall be so equipped that fires may be built and steam raised in cold locomotives without the production of smoke of a density greater than No. 3 Ringelmann for period of more than /6/ minutes in one hour. All locomotives stationed at such locations shall be equipped with approved devices by means of which fires may be cleaned; fires may be built; and steam raised in cold locomotives without the production of smoke of that density for a period of more than six /6/ minutes in one hour.

/b/ It shall be unlawful for a locomotive in service or out of service to emit smoke of a shade or appearance greater than No. 2 Ringelmann for more than one /1/ minute in any 15-minute period. This sub-section, however, will not apply when the fire is being cleaned or when the fire is being built.

/c/ It shall be unlawful for any other vehicle to emit smoke of the shade or appearance greater than No. 2 Ringelmann for more than one /1/ minute in any fifteen /15/ minute period.

/d/ The Air Pollution Control Officer may require any vehicle used permanently or temporarily to be equipped with approved devices for smoke elimination if it violates the section above.

3. Dust

Not to exceed 0.85 lb. per 1,000 lbs. of gases, adjusted to 50 percent excess air for products of combustion, except:

/a/ for fuel-burning equipment constructed subsequent to the effective date of the ordinance, a dust-collecting efficiency of not more than 85 percent shall be required for special dust-separating apparatus.

/b/ for fuel-burning equipment constructed prior to the effective date of the ordinance, a dust-collecting efficiency of not more than 75 percent shall be required.

"All new installations of pulverized fuel-burning equipment, spreader stokers or any similar suspension-burning types shall be provided with dust-separating equipment if considered necessary by the Air Pollution Control Officer." /sec. 301/.

4. Fumes and Soot

That are "a detriment to the property of others or that are a nuisance to any person" shall not be discharged from any fuel-burning equipment, internal combustion engine, premises, open fire, or stack.

V. Enforcement

A. Unlawful Conduct

To violate the seal on any fuel-burning equipment sealed at the direction of the Air Pollution Officer without his written authorization to do so. /sec. 301/.

B. Inspection

1. All new installations in portions of existing installations shall be inspected to insure that the new work complies with the ordinance and with approved plans. /sec. 107.1/.

2. A final inspection and approval shall be requested and made before any new installations made under a permit are put into operation. The installer shall

have the duty of notifying the Building Official of his readiness for such inspection. /sec. 107.2/.

C. Stop Work Orders; Sealing

1. When work is being done contrary to the provisions of the ordinance or in deviation from approved plans, the Air Pollution Control Officer shall notify the offending party in writing to stop work, specifying the conditions under which it may be resumed. In emergencies, oral notice shall suffice. /sec. 103.2/.

2. Failure to comply with any order of the Air Pollution Control Officer within a reasonable time shall be cause for the sealing of offending equipment, the seal not to be broken until corrections have been made. Should an appeal be taken from the order, the Air Pollution Control Officer may remove the seal, unless, in his opinion, an emergency exists. /sec. 103.2/.

3. If any person violates the standards set forth in the ordinance, he shall, after previous notification of three or more violations within 12 consecutive months, be notified to show cause not less than 10 days from the date of the notice to show cause why his equipment should not be sealed. If, upon hearing at which he may appear, it is determined by the Air Pollution Control Officer that adequate corrective measures have not been taken, the equipment shall be sealed. An appeal from this decision may be taken within 10 days, such appeal to stay the sealing order pending its determination. /sec. 301/.

D. Variances - See E 2 below.

E. Appeals

1. Appeals from decisions of the Air Pollution Control Officer regarding the mode or manner of installations, materials to be used therein, the application of the ordinance to the projected installation, or his interpretation of the ordinance may be taken to the Appeals Board within 30 days, on the filing of a written notice. /sec. 110.1/.

2. After hearing the appeal, the Board may vary the application of the ordinance or modify its interpretation when in its judgment to do otherwise would work an injustice or depart from the purpose of the ordinance. /sec. 111.1/.

3. The decision of the Appeals Board shall be final,

subject however, to such remedies as the aggrieved may have at law or in equity. /sec. 111.2/.

F. Penalties

1. Fine, not to exceed $100, or

2. Imprisonment not in excess of 30 days,

3. Each day, or portion thereof, during which a violation of the ordinance is committed or continued, shall constitute a separate offense. /sec. 112/.

VI. Preventive Programs

A. Permits

1. Required for the installation, construction, enlargement, alteration, or repair of any equipment regulated by the ordinance, with the exception of ordinary minor repairs. /sec. 104.1/.

2. Applications to be made to the Building Official, accompanied by plans and specifications when, in his judgment, they are required to effect the purposes of the ordinance; except that the installation of any fuel-burning equipment with a capacity of more than 400,000 B.T.U. shall require the submission of plans and specifications. /sec. 104.2/.

3. The Building Official shall act on the application without unreasonable delay. If rejected, the applicant may request a written explanation of the reasons therefor. /sec. 105.1/.

4. Permits shall become invalid if the work authorized by them is not begun within 6 months, or is suspended or abandoned for more than 1 year after it is begun, but one or more extension of not more than 90 days may be granted by the Building Official for cause. /sec. 105.2/.

B. Reports

The Air Pollution Control Officer shall submit an annual report to the Building Official, summarizing the work of the Air Pollution Control Section during the preceding year, decisions and examinations of the Board of Appeals, and rules and regulations established by the Advisory Board. /sec. 103.7/.

MEMPHIS, TENN.

I. Ordinance

City of Memphis Smoke Ordinance.

II. General Statement

An ordinance to regulate, define and prohibit the emission of dense smoke and deleterious gases; to provide for a smoke marshal and to define his powers and duties; to regulate the installation, reconstruction or repair of boilers, furnaces and other plants causing smoke; and to prescribe penalties for violations.

III. Administrative Organization

A. Smoke Marshal under the general supervision of the Commissioner of Public Service, who is appointed by the Board of Commissioners of the city. His duties shall include:

1. Enforcement of the Ordinance and to aid in enforcement of state smoke laws.
2. Maintenance of a complete record of all transactions of his office, open to public inspection.
3. Consultation and advisement of the City Smoke Commission on regulation and prevention of smoke, and technical and engineering problems when necessary.
4. Approval of plans and specifications necessary for construction or alteration of smoke-emitting devices after investigation of such proposed changes.
5. Issuance of permits, and inspection of construction or alteration of smoke-emitting devices to determine if such work is in compliance with plans and specifications submitted. /secs. 2, 7, 8/.

IV. Applicability

A. Sources

Smoke stacks of any locomotive, steam roller, steam derrick, steam pile driver, or other portable or temporary smoke-making device or apparatus, smoke stack or chimney of any building or premises, or from any open bonfire, open bin furnace, tubular boilers, portable boilers, tank, vat, bin, tar kettle or other receptacle. /sec. 5/.

B. Specific Pollutants

1. Smoke

Of a density equal to or greater than No. 3 Ringelmann for a period of more than one minute is prohibited, except that emission for a period or periods not to exceed six minutes in any one hour when a firebox is being cleaned or a new fire is being built therein is not prohibited. /secs. 5, 6/.

2. Gases and smoke containing soot, partly burnt shavings, cinders, ashes, obnoxious gases or other deleterious substances in sufficient quantities to be injurious to property, or health of individuals. /sec. 6/.

V. Enforcement

A. Abatement

1. The emission of dense smoke, except as otherwise provided, is declared to be a nuisance and may be summarily abated by the Smoke Marshal, or by anyone he may authorize for that purpose. /sec. 5/.

B. Unlawful Conduct

1. Any person or persons, firm or corporation, leasing, operating or in charge of or in control of any building or premises or any smoke-emitting device, who shall cause or permit the emission of dense smoke, or gases, or deleterious substances, shall be guilty of a violation of this Ordinance. /sec. 6/.

2. To use any new or reconstructed plant for the production and generation of power and heat, or either of them, until a final certificate is procured from the Smoke Marshal stating that the plant is constructed or reconstructed in accordance with the plans and specifications previously submitted. /sec. 9/.

3. For the owner, lessee, or operator of any existing plant to alter or repair any chimney or any furnace or device, which shall effect smoke prevention, without first submitting plans and specifications to the Smoke Marshal and securing a permit therefor, except for minor necessary or emergency repairs which do not involve a change in the capacity of the plant or affect smoke prevention. /sec. 10/.

4. To deny admittance, after proper identification, to

the Smoke Marshal or his assistants, or to interfere with him or them in the performance of his or their duties. /sec. 21/.

C. Inspection

The Smoke Marshal and deputy or assistant smoke marshals shall have the right to enter all premises in the performance of their duties at all reasonable hours. /sec. 21/.

D. Penalties

Any person, or corporation, who shall violate any provisions of the Ordinance shall be subject to a fine not less than $1 nor to exceed $50 for each offense. Each day a violation occurs is a separate offense. /secs. 6, 22/.

VI. Preventive Programs

A. Installation Permits

1. Required for the construction, reconstruction, or alteration of any new or old plant, or new or old chimney, for producing power and heat, or either of them. No permit is required for necessary minor or emergency repairs which do not change the capacity of such plant or which do not involve any alteration in the method or efficiency of smoke prevention.

2. Applications for permits shall be accompanied by plans and specifications showing:

/a/ The connected load and amount of work and heating to be done by such plant and appurtenances.

/b/ That the installation is sufficient for the purpose of securing complete combustion of the fuel to be used, and for the purpose of preventing smoke.

/c/ The kind of fuel proposed to be used, including the commercial size of coal when such fuel is specified.

/d/ That the room, apartment or basement in which such plant is to be located is provided with doors, windows, air shafts, or other means of ventilation sufficient to prevent the temperature in such place from rising to a point higher than 120 degrees F., measured at a point 5 1/2 feet above the floor; and sufficient also to provide that the atmosphere of any such place may be entirely renewed every ten minutes. /sec. 7/.

B. Operating Permits

1. Required before use of a new or reconstructed plant showing that the plant is constructed or reconstructed in accordance with the plans and specifications submitted at the time the permit was issued. /sec. 9/.

NASHVILLE, TENN.

I. Ordinance

Bill No. 47-56, October 22, 1947.

II. General Statement

An ordinance regulating the production and emission of smoke from any chimney, smokestack, or other source; regulating air pollution caused by the escape of soot, cinders, noxious acids, fumes, gases and fly ash; regulating the construction, reconstruction, repair, maintenance, use of, and additions to, refuse burning equipment and fuel burning plants, including fuel burning equipment and devices, and requiring notice of all purchases and sales thereof; establishing a Division of Smoke Regulation, a Superintendent of Smoke Regulation and other employees; requiring smoke indicators or other approved methods of observing smoke from the boiler or furnace room in certain cases; prohibiting the importation, sale, exchange, delivery, use, or consumption of certain solid fuels for specified hand-fired or surface burning types of equipment; providing for examination of plans and specifications and issuance of permits, inspection and issuance of certificates of inspection or operation; establishing a Smoke Appeal Board, and providing fines and penalties for violations hereof.

III. Administrative Organization

A. Division of Smoke Regulation, within the Department of Public Works, headed by a Superintendent of Smoke Regulation with the assistance of a Deputy Superintendent of Smoke Regulation, at least 2 inspectors, and a Secretary, all of whom shall be appointed by the Director of Public Works upon approval by the Mayor.

General powers and duties:

1. Enforcement of smoke regulation ordinances and prosecution of violations thereof.

2. Operation and execution of educational plans for securing the cooperation of the public in reducing smoke emission.

3. Submit reports to the Mayor, at least quarterly.

4. Keep records of plans submitted and permits issued, inspections made and certificates issued, stacks or chimneys observed, and smoke observations of stacks and chimneys found to violate this Ordinance. /sec. 19/.

5. Authority to enter premises to inspect records of sales. /sec. 5/.

B. Smoke Appeal Board, consisting of 3 members appointed by Mayor.

General powers and duties:

1. Adopt standards, rules, and regulations.
2. Administer oaths and compel attendance of witnesses and introduction of documents.
3. Hear and decide appeals from decisions of Superintendent of Smoke Regulation. /secs. 11, 18/.

IV. Applicability

A. Sources

Stacks, chimneys, open fires, furnaces, coal burning devices and refuse burning devices.

1. Locomotives shall be operated with smokeless fuels /defined in C below/ or shall be equipped with mechanical fuel burning devices, i.e., those by means of which fresh fuel is mechanically fired from outside the furnace into the zone of combustion, the same being activated by automatic controls. /secs. 3, 3a/.
2. Heating and power plants of 20 H.P. or greater capacity, except those using gas, oil, or electricity, shall provide a means whereby the fireman can observe smoke emission from the stack without leaving the boiler or furnace room. Such means may be an opening providing an unobstructed view, a mirror reflecting the top of the stack into the boiler room, or an approved smoke indicator. /sec. 17/.
3. Fuel burning and/or refuse burning units shall use a smokeless fuel or an approved mechanical fuel burning device, except:

/a/ equipment in private residences of 3 dwelling units or less

/b/ down draft boilers accepted at the discretion of the Superintendent

/c/ equipment in which fresh fuel is hand-fired where the Superintendent has found and certified that it is so designed as to burn the fuel smokelessly and automatically in a manner not violative of this Ordinance. /sec. 13/.

B. Specific Pollutants

1. Smoke of a density equal to or greater than No. 2 Ringelmann is prohibited and declared to be a nuisance, with the following exceptions:

/a/ periods aggregating 6 minutes or less in any 60 minute period when a firebox is being cleaned or a new fire built.

/b/ for a period aggregating no more than 1 minute in any 10 minute period after a locomotive is in service or ready for service.

/c/ all buildings, with heating units, used exclusively for private residences and containing 3 dwelling units or less. /sec. 1/.

2. Soot, cinders, noxious acids, fumes or gases may not be emitted in such quantity as to cause injury, detriment, or nuisance from any stack, chimney, or open fire, except exclusively residential buildings of 3 dwelling units or less. /sec. 2/.

3. Fly ash from furnaces and coal burning combustion devices shall not be emitted in excess of 0.75 grains per cu. ft. of flue gas at a temperature of 500 degrees F, which amount not to exceed 0.2 of a grain per cu. ft. shall be of such size as to be retained on a 325 mesh U.S. Standard Sieve. These conditions, to be measured by the A.S.M.E. Code, shall be conformed to when the excess air in the stack does not exceed 50 percent at full load. Equipment in exclusively residential buildings with 3 or less dwelling units is exempted from the provisions of this section requiring means of keeping fly ash emission within this standard. /sec. 2/.

C. Volatility

Smokeless fuel shall be oil, gas, electricity, or solid fuel the volatile content of which is 23 percent or less on a dry basis. However, fuel of higher volatility may be acceptable if it is found to meet the same standards of smoke prevention, on condition that the Superintendent be provided with plans and specifications and an adequate supply of the fuel for such tests as he may wish to make, and that the person submitting such fuel bear all costs of testing.

V. Enforcement

A. Abatement

The emission of dense smoke, soot, cinders, noxious acids, fumes, gases or fly ash prohibited by this Ordinance may be summarily abated by the Superintendent or his authorized agent. /secs. 1, 2/.

B. Unlawful Conduct

1. To violate the provisions of this Ordinance respecting permits /sec. 4/, sales of fuel burning equipment /sec. 5/, certificates of operation /secs. 6, 7/.
2. To break the seal on equipment sealed by the Superintendent without his written authorization to do so. /sec. 10/.
3. To interfere with the performance of duty of the Superintendent, his agents, assistants or police officers, or deny them entrance to premises at reasonable hours. /sec. 12/.
4. To sell, exchange, deliver or transport solid fuel for handfiring or surface burning types of equipment which fails to meet the standards of a smokeless fuel set forth in this Ordinance, unless it is to be used in equipment described in IV A 3 above. /sec. 14/.

C. Inspection

Shall be made annually of every furnace or other fuel burning equipment, except

1. That used to heat buildings used exclusively for private residences containing 3 separate dwelling units or less
2. That used exclusively for private residences which do not contain a central heating plant
3. That using gas, oil or electricity
4. That used exclusively for heating purposes other than that composing central heating units. /sec. 15c/.

D. Record Keeping

1. Sellers of refuse or fuel burning equipment or devices which are required to be connected to a vent or stack shall make a written report of the sale of each such article to the Superintendent within 7 days of the sale. The buyer shall give the seller a signed statement setting forth the address of the building in which the equipment is to be installed, and this address shall be included in the report of the sale.

2. Wholesale transactions made for the purpose of resale are exempted from this requirement. /sec. 5/.

E. Sealing

1. After previous notification of 3 or more violations within a 12 month period, the violator shall be notified to show cause before the Superintendent, not less than 10 days later, why the offending equipment should not be sealed. He may then appear and be heard, either in person or by counsel. If the Superintendent finds that adequate corrective measures have not been taken, he shall seal the equipment until a certificate of operation or inspection has been issued for it. This decision may be appealed within 10 days, and such appeal shall stay the sealing. /sec. 10/.

2. Failure to submit plans and specifications for approval prior to installation, addition or repair as required in VI A below, shall be grounds for sealing. /sec. 4/.

3. Whenever a certificate of operation or inspection is refused, the Superintendent shall have authority to seal the equipment until the provisions of this Ordinance shall have been complied with. /sec. 15c/.

F. Procedure

1. Appeals may be taken from any decision of the Superintendent within 10 days by filing with him notice of the appeal directed to the Appeal Board specifying the grounds thereof and the relief sought.

2. The Board shall fix a reasonable time for the hearing, at which any party may appear personally or by agent or attorney.

3. The appeal shall be accompanied by a $5 fee, and shall act as a stay of the decision complained of. /sec. 11/.

G. Penalties

Violators shall be fined not less than $25 nor more than

$50 for each violation, and in default of payment shall be imprisoned for a period not exceeding 30 days. Each day's violation shall constitute a separate offense, and unlawful emission from each stack shall constitute a separate offense. /sec. 16/.

VI. Preventive Programs

A. Installation Permits

1. Required for the installation, erection, repair, reconstruction or alteration of fuel and refuse burning equipment, and chimneys, stacks, and furnaces connected therewith.

2. Plans and specifications shall show

/a/ type of installation

/b/ amount of work and heat to be done

/c/ provisions for securing complete combustion

/d/ manner of burning

/e/ kind of fuel or refuse to be burned, its rate and manner

/f/ ventilation provisions which will keep the temperature in the room housing the equipment from rising above 120 degrees F.

/g/ provision for change of atmosphere in the room at least every 10 minutes

/h/ dimensions of the room, and location and dimensions of all chimneys and stacks to be used with the equipment.

3. Once the permit has been issued, the Superintendent, through his agents, shall see that the work is done in conformity with approved plans and specifications.

4. Exceptions:

/a/ repairs to previously approved plants, provided they are reported to the Superintendent within 3 days of their commencement.

/b/ emergency repairs, provided they are reported to the Superintendent in the first business day after their commencement and application for a permit is then made.

/c/ replacement, repairs and reconstruction of heating plants in existing buildings used for private residences and containing 3 separate dwelling units or less. /sec. 4/.

5. Permits shall not be issued for the installation of any fuel burning equipment of the surface burning type unless it is to use a smokeless fuel or be equipped with a mechanical fuel burning device which will prevent the escape of dense smoke and other pollutants. /sec. 9/.

B. Operating Certificates

Required for the use of any new, reconstructed or repaired plant or addition thereto, or any plant duly sealed under the provisions of this Ordinance. /sec. 6/.

C. Certificate of Inspection

Required for the operation of solid fuel burning equipment subject to annual inspection as provided in V C above. /sec. 7/.

VII. Miscellaneous

The Bureau of Inspection and Permits shall not issue a permit for buildings or structures with chimneys or stacks until the plans have been approved by the Superintendent. /sec. 8/.

DALLAS, TEX.

I. Ordinance

Ordinance No. 5758, April 7, 1953.

II. General Statement

The Ordinance provides for the control of smoke and air pollution; provides regulations for the proper installation and maintenance of fuel-consuming devices; requires permits; defines the powers and duties of the Building Inspector; and provides a penalty.

"Atmospheric pollution" is defined as the discharging from stacks, chimneys, exhausts, vents, ducts, openings or bonfires, of any smoke, soot, fly ash, cinders, noxious acids, fumes, oxides, gases, vapors or industrial ducts that cause atmospheric contamination in amounts detrimental to the public health and welfare.

III. Administrative Organization

Building Inspector has the duty to enforce this Ordinance. /sec. 5/.

IV. Applicability

A. Sources

Each fuel-burning device shall be designed, operated, and maintained so that the gases shall be distilled or utilized from the fuel at a uniform rate, be brought into intimate mixture with sufficient air for combustion and have adequate temperature, space, and time to completely mix and burn the fuel in such a manner as to prevent excessive emission at atmospheric pollutants. Solid-fuel consuming devices shall be provided with means to reduce the emissions of gas or air-borne solids of fumes so that they do not exceed 0.30 grains per cubic foot of the carrying medium at a temperature of 500 degrees F. Measurements shall be according to the A.S.M.E. Test Code. /sec. 2/.

B. Specific Pollutants

1. No person shall permit or cause the escape of such quantities of soot, cinders, noxious acids, fumes, gases, fly ash, or industrial dusts in such place or manner as to endanger or be detrimental to the health, comfort and safety of any person or to cause injury or damage to property or business. /sec. 3/.

2. No person shall permit the emission of smoke from any source of a density equal to or greater than No. 2 Ringelmann except:

/a/ Smoke equal to but not darker than No. 2 Ringelmann for four minutes in any 30 minutes.

/b/ Smoke equal to but not darker than No. 3 Ringelmann for three minutes in any 15 minutes when building a new fire or a breakdown of equipment occurs so that the emission was not reasonably preventable.

/c/ One and two family residences. /sec. 3/.

V. Enforcement

A. Unlawful Acts

No person shall interfere or impede in any manner the Building Inspector's performance of duties. /sec. 6/.

B. Penalties

Any person who violates this Ordinance is guilty of a misdemeanor and subject to a fine of not more than $200.00. /sec. 7/.

VI. Preventive Programs

No fuel or refuse burning plant or any stack or furnace connected thereto shall be installed, constructed, reconstructed, repaired or added to until plans and specifications have been filed with and approved by the Building Inspector that they are so designed that they can be operated within the provisions of this Ordinance and a building permit has been issued in accordance with the Building Code. /sec. 4/.

DANVILLE, VA.

I. Ordinance

Ordinance dated January 12, 1953

II. General Statement

An ordinance to control air pollution by setting standards for the emission of smoke and dust, soot, cinders, fly ash, acids, fumes, and dirt, prohibiting the open burning of certain materials; requiring installation permits; and providing for the sealing of non-complying equipment. Definition of person includes any department, bureau, agency or agents.

III. Administrative Organization

A. Department of Air Pollution Control created, headed by the Director of Air Pollution, appointed by the City Manager /sec. 3/.

General powers: /secs. 5,6/.

1. Enforce this ordinance, its rules and regulations
2. Inspect plans and issue permits
3. Inspect plants and investigate complaints
4. Enter buildings at reasonable hours.

B. Air Pollution Control Board of 9 members, appointed by the President of City Council /sec. 7/.

General powers: /sec. 8/.

1. Advise the Director on technical matters
2. Consider and rule on proposed rules and regulations
3. Hear appeals from decisions of the Director.

IV. Applicability

A. Sources:

1. Fuel-burning equipment, internal combustion engines, premises, industrial process, manufacturing operation, material handling, dust-separating equipment.
2. Open fires - may not be used to burn old rubber,

automobile batteries, leather, waste oils or grease, garbage, junk automobiles or similar items, cloth materials, plastics, or any such refuse.

The building of open fires is declared to be contrary to the purpose of the ordinance and subject to regulation by the Director. /sec. 11/.

B. Specific Pollutants:

1. Smoke of a density equal to or greater than No. 2 Ringelmann is declared to be dense and a nuisance, and is prohibited, except that a density of No. 2 shall be permitted for 4 minutes in any 30 minutes, and a density of No. 3 shall be permitted for 2 minutes in any 15 minutes, when a firebox is being cleaned or a new fire built therein. /sec. 10/.

2. Dust

/a/ from fuel-burning equipment or premises shall not exceed 0.85 lb./1000 lbs. of gases, adjusted to 50 percent excess air for products of combustion.

/b/ from industrial processes, manufacturing operations, material handling, or other source, shall not exceed 0.85 lbs./1000 lb. of gases.

/c/ an efficiency of not more than 85 percent shall be required for special dust-separating equipment.

/d/ measurements shall be according to the ASME Test Code, and the limitations may be waived during equipment breakdowns. /sec. 12/.

3. Fly ash, soot, cinders, acid or other fumes, dirt or other material or noxious gases shall not be emitted in such quantity as to cause injury or detriment to any person or persons or to the public. /sec. 12/.

V. Enforcement

A. Nuisance - see B-1 above

B. Unlawful Conduct

The violation of a seal on any equipment or process duly sealed by the Director without his written authorization. /sec. 14/.

C. Sealing /sec. 13/.

1. After previous notification of 3 or more violations within 12 consecutive months, the violator shall be notified to show cause, within 10 days, why the offending equipment should not be sealed.

2. He may appear and be heard at a hearing before the Director who shall seal the equipment on a finding that adequate corrective measures have not been taken.

3. He may appeal /see D below/ and such appeal shall serve to stay the sealing order.

D. Procedure - /sec. 8c/.

1. Appeals - may be taken to the Air Pollution Control Board from any decision of the Director by filing a written notice of appeal with the Director within 10 days of the decision complained of, specifying the grounds thereof and the relief sought.

2. A hearing shall be held not more than 30 nor less than 15 days from the filing of the appeal, at which the appellant may appear in person or by agent or attorney.

3. The appeal shall stay the decision appealed from, and a final determination shall be made within 10 days of the hearing.

4. A $25 deposit shall be made to cover the costs of the hearing, to be forfeited on affirmation of the decision appealed from.

E. Penalties - none

VI. Preventive Programs

A. Installation Permits /sec. 15/.

1. May be required for the construction, installation or alteration of any equipment capable of emitting air pollutants.

2. Shall be issued after inspection and approval of plans and specifications, except emergency repairs may be begun without a prior permit provided a permit is applied for on the first business day thereafter.

3. Applications shall be acted on within 10 days of filing.

4. Exceptions to this requirement

/a/ minor alterations, and alterations which do not change the character of the equipment or affect the process

/b/ equipment of a temporary and experimental character

/c/ all equipment related to secret processes except that directly related to pollutant emission

5. Violations of the permit shall be cause for its revocation, subject to appeal.

VII. Miscellaneous

No City Department shall permit the erection, construction or alteration of any building, plant or structure containing equipment subject to this ordinance until the Director has issued an installation permit covering said equipment.

NEWPORT NEWS, VA.

I. Ordinance

Ordinance No. 55, August 25, 1958

II. General Statement

An ordinance to control smoke and air pollution by prescribing standards of smoke emission, the use of smokeless fuel, and the prohibition of excessive discharges of particulate matter; requiring installation permits and annual inspection; and providing penalties for violations.

III. Administrative Organization

A. Bureau of Building Inspection is authorized and directed to enforce the ordinance /sec. 5/, and its duties are /sec. 6/:

1. to investigate complaints of violations and institute necessary proceedings
2. to investigate and recommend revisions of this and/or other ordinances pertaining to air pollution
3. to make yearly inspections of all fuel-consuming devices
4. to prepare and disseminate appropriate educational literature to the public
5. to cooperate with civic and other organizations interested in smoke prevention
6. to promulgate and publish rules and regulations under which this ordinance will be administered
7. to issue permits; notify parties concerned of decisions and provide them with an opportunity for a hearing as hereinafter provided.

B. Board of Appeals of at least 3 members appointed by the City Council to hear and decide appeals from decisions of the Bureau of Building inspection /sec. 11/.

IV. Applicability

A. Sources /see IV B/

B. Specific Pollutants:

1. The emission from any source of smoke of a density equal to or greater than No. 2 Ringelmann is unlawful and is declared to be a public nuisance /sec. 2/, except /sec. 3/:

/a/ private residences in which no more than two families are or can be housed are exempted.

/b/ when a firebox, furnace, boiler, locomotive, or other fuel-consuming device is being cleaned out and a new fire is being built therein, a density greater than No. 2 Ringelmann shall be permitted for a period not to exceed 6 minutes in any single 60 minute period.

2. The escape of such quantities of soot, cinders, noxious acids, fumes, gases, dust, ore dust and coal dust, whether resulting from combustion of fuel or not, in such place or manner as to be detrimental to any person or to the public or to endanger the health, comfort and safety of any such person or of the public, or in such manner as to cause or have a tendency to cause injury or damage to property or business is unlawful and is declared to be a public nuisance. /sec. 4/.

C. Volatility: /sec. 7/.

1. The use or consumption in any solid fuel-burning equipment of any solid fuel, the volatile content of which is 20 percent or less on a dry basis, except that fuel of higher volatility may be used if it meets the same standards regarding smoke production determined by:

/a/ filing complete plans and specifications for the use of such fuel with the Bureau.

/b/ making available to the Bureau an adequate supply of the finished product for the conduct of whatever tests are deemed necessary.

The Bureau is authorized to publish a list of brands or trade names of smokeless solid fuels, and to publish from time to time statistics in reference to supply, prevailing prices, and other pertinent facts for the guidance of the public.

2. Fuels having a volatile content in excess of 20 percent, but not meeting the conditions herein enumerated, can be used on the issuance of a permit by the Bureau only in heating devices equipped

with appliances constructed to insure complete combustion, designed to prevent prohibited air pollution, and previously approved by the Bureau.

V. Enforcement

A. Nuisances

As defined in IV A 1 and 2 above, may be summarily abated by the Bureau or anyone whom it designates for such purpose. /secs. 2,4/.

B. Unlawful Conduct

Interference with the performance of duty of the Bureau, its employees or representatives constitutes a misdemeanor punishable by the penalties provided for violations of this ordinance. /sec. 12/.

C. Inspections

Shall be made annually by the Bureau of each fuel-consuming device to which this ordinance applies and a certificate issued to the owner thereof if it meets the standards herein established. The certificate will authorize the continued operation of the device, and failure to possess one will be considered a violation of this ordinance, except that all devices not inspected at the time of its passage may continue in operation until such time as the Bureau makes its annual inspection of them. /sec. 9/.

D. Period of Grace

A temporary permit for the continued operation of equipment not complying with the provisions of this ordinance may be issued by the Bureau if the party responsible has taken all necessary steps to secure compliance. The permit may be issued for a period of not longer than 6 months, at the expiration of which the holder shall be deemed in violation of this ordinance. /sec. 13/.

E. Procedure

1. Hearings - any person aggrieved by any ruling by the Bureau shall have the right to require the Bureau to conduct a full and complete hearing prior to actual and final decision. Such hearing shall afford him a full opportunity to present any evidence which he may desire to support his position. The Bureau shall notify all parties concerned of its ruling in such hearings promptly.

/sec. 10/.

2. Appeals - on all appeals taken to the Board, appropriate hearings shall be held after due notice to the parties concerned. All pertinent papers in the files of the Bureau shall be made available to the Board in each case. /sec. 11/.

F. Penalties

Violators of this ordinance "shall be fined not to exceed $200.00 for each violation thereof, and be subjected to imprisonment for not to exceed 30 days." Offenses on separate days are deemed separate offenses. /sec. 16/.

VI. Preventive Programs

A. Permits

Shall be required for the installation, erection, reconstruction, repair, addition to, or alteration of fuel-burning plants for producing power and heat, refuse-burning equipment, and any stacks or furnaces connected to either. Plans and specifications shall be filed with the Bureau, as required by its rules and regulations. If it appears that the proposed work will not be inconsistent with the purposes of this ordinance, the Bureau shall issue the permit, otherwise it shall be denied. /sec. 8/.

ROANOKE, VA.

I. Ordinance

Roanoke City Code - Title 15, Chapter 5 - Ordinance No. 12504 October 3, 1955.

II. General Statement

An ordinance regulating the emission of smoke, fumes, gases and particulate matter; prohibiting certain uses of open fires; requiring installation permits and operating certificates; and providing penalties for violations.

III. Administrative Organization

A. Department of Air Pollution Control, headed by the Air Pollution Engineer, who shall be appointed by the City Manager and whose duties shall include:

1. Administering this chapter.
2. Issuing notices provided hereunder.
3. Investigating complaints, making inspections and observations.
4. Promulgating rules and regulations previously approved by resolution of the City Council. /secs. 2, 4, 6/.

B. Advisory and Appeal Board of 5 members appointed by the City Council, to advise the Council and the Air Pollution Engineer on matters of air pollution control and to review appeals from decisions of the Engineer. /sec. 3/.

IV. Applicability

A. Sources

1. Heating plants having an input of 400,000 or more BTU'S per hour shall be an approved smokeless type, or be equipped with mechanical means of firing coal, oil or gas, except that a permit may be issued for the use of coke only. A permit may be issued for only one such boiler in any one plant. /sec. 13/.
2. Open fires shall not burn refuse in such manner as to cause "nuisance, annoyance, detriment or discomfort". Outdoor fireplaces shall not be used as incinerators in such manner as to cause "nuisance, annoyance, detriment or discomfort", or the emission of unlawful smoke, fumes, fly ash, soot or dust. /sec. 16/.

B. Specific Pollutants

1. Smoke - of a density equal to or greater than No. 3 Ringelmann is designated "dense" and is declared a nuisance, except when emitted for periods aggregating six minutes in any sixty minutes when a firebox is being cleaned or a new fire is being built.

   The emission at any time of smoke equal to or greater than No. 5 Ringelmann is prohibited. /sec. 7/.

2. Locomotives may emit dense smoke.

/a/ At roundhouses and terminals for periods aggregating six minutes in any sixty minutes when fires are being cleaned or new fires built in cold locomotives.

/b/ For an aggregate of not more than two minutes in any sixty-minute period after the fire has been built. /sec. 8/.

/c/ Visible fumes or gases other than smoke may not be emitted in densities equal to or greater than No. 1 Ringelmann. /sec. 9/.

/d/ Cinders, dust, fly ash, soot, acid, fumes, dirt, obnoxious gases or other materials may not be emitted in such quantities as to cause 'injury, detriment, nuisance or annoyance". /sec. 10/.

V. Enforcement

A. Nuisance

Created by smoke emissions prohibited by IV B1 above may be summarily abated by the Engineer or his duly authorized representative. /sec. 7/.

B. Unlawful Conduct

1. To deny entry to premises at reasonable hours to the Engineer or his assistants or to interfere with him or them in the performance of his or their duties. /sec. 15/.

2. To violate a seal of any equipment duly sealed by the Engineer unless authorized by him in writing, or by a court of competent jurisdiction. /sec. 18/.

C. Sealing

1. After conviction more than once of any violation

hereof, a person may be notified to show cause, within 10 days, why the offending equipment should not be sealed.

2. If upon the hearing, at which the person so charged may appear, the engineer determines that adequate correctives have not been employed, he may seal the equipment until the necessary changes have been made. /sec. 17/.

D. Defense

Absence of an adequate supply of smokeless fuel or a practical device for the prevention of unlawful emissions shall be a good defense to actions brought under this ordinance. /sec. 11/.

E. Appeals

1. Appeals from the decisions of the Engineer may be made in writing to the Appeals Board. /sec. 3/.

2. Appeals from sealing orders shall be made within 10 days, and shall serve to stay the order pending the appeal. /sec. 17/.

F. Penalties

Fine of not less than $10 nor more than $100 for each violation, and each day's violation shall be deemed a separate offense. /sec. 19/.

VI. Preventive Programs

A. Permits

1. Required for the construction, installation, reconstruction, alteration, or repair of heating or combustion equipment using solid fuel or commercial oil /known as Bunker C or No. 5 or No. 6 oil/, or having a fuel input of 400,000 or more BTU'S per hour. /sec. 5/.

2. Applications shall be filed with the city's Building Commissioner, who shall transmit accompanying plans and specifications to the Air Pollution Engineer for his endorsement. If endorsed as not violative of the provisions of this ordinance, they shall be returned to the building commissioner who shall issue the permits. /sec. 5/.

3. The Engineer shall inspect work done under a permit on completion and if it conforms to the requirements of this ordinance respecting air pollution, shall notify the Building Commissioner who shall, after his inspection, issue a certificate of inspection. No equipment requiring inspection shall be put into operation until such certificate has been issued. /sec. 12/.

SEATTLE, WASH.

I. Ordinance

Ordinance No. 90000 /Eff. March, 1961/.

II. General Statement

Ordinance regulates emission of air contaminants, creates the Air Pollution Control Advisory Board, and vests powers in the Superintendent of Buildings. The definitions section defines Air Pollution as "The placing or presence in the air of air contaminants".

III. Administrative Organization

A. Superintendent of Buildings - has power of enforcement and may adopt rules and regulations, conduct inspection, hold hearings and post or seal equipment or premises. /sec. 100/.

B. Air Pollution Control Advisory Board - composed of 17 representative members appointed by Mayor and Superintendent of Buildings, Director of Public Health and Chairman of the Public Safety Committee, Ex Officio. Duties of Board are to study control of air pollution and administration of air pollution regulations, it shall also seek practical means of measuring and controlling emissions of specific air contaminants. It may hold hearings and make recommendations, but it shall act in an advisory capacity only. /secs. 20, 30, 40, 50/.

IV. Applicability

A. Sources /See IV B/

B. Specific Pollutants

1. Smoke - Emission of smoke /from any source other than heat processing equipment/, the opacity of which is equal to or more than 40 percent, prohibited, exceptions: /a/ Emissions for not more than 4 minutes in any 60 minutes, when it shall be 60 percent or less. /b/ When building a new fire for not more than 12 minutes in any 60 minutes, when it shall be 60 percent or less. /c/ Temporarily due to breakdown of equipment, provided that repairs promptly made. /d/ During time for compliance fixed by superintendent.

Percent of opacity measured by methods equivalent to those in Ringelmann Smoke Chart. /sec. 60/.

2. Dust from Fuel Burning Equipment - Emission of effluent from any fuel burning equipment, the dust content of which is more than 0.85 lb. of dust per 1,000 lb. of effluent, adjusted to 50 percent excess air for products of combustion, exceptions: /a/ Where dust content of effluent controlled by use of dust separating equipment, provided that 75 percent, /if installed prior to effective date of ordinance/ and 85 percent /if thereafter installed/ of all dust is collected. /b/ Temporary emission due to breakdowns, provided repairs promptly made. /c/ During time for compliance fixed by superintendent. /sec. 70/.

3. Dust from Heat Processing Equipment - Emissions of dust from any heat processing equipment, or from milling, grinding, crushing or handling of any material in quantities exceeding that set forth in attached table. Exceptions: /a/ Where equipment installed prior to effective date of ordinance and where emissions are in excess of table but are controlled through dust separating equipment, provided that such equipment shall collect not less than 98.2 percent of all dust in the effluent from the process. /b/ Temporarily due to breakdown provided repairs promptly made. /c/ During time for compliance fixed by superintendent. /sec. 80/.

4. Traceable Dust, Generally - Discharge of dust particles which become deposited on real property of others and which are of such size and nature as to be readily recognizable and traceable to their source. Exceptions: /a/ Dust specified under 3 and 4 above. /b/ Temporarily, due to breakdown of equipment, provided repairs promptly made. /c/ During time for compliance fixed by superintendent. /sec. 90/.

V. Enforcement

A. Unlawful Acts

Operation of any equipment or occupation on any premises, designated by superintendent as unlawful to operate or occupy except on his written authority. /sec. 160/.

B. Procedure

1. Notice - Where superintendent finds violation, written notice must be given to comply with ordinance within reasonable time. /sec. 110/.

2. Extension of Compliance Time - Owner or operator of equipment or premises found by superintendent to be in violation may request extension of compliance time; if superintendent finds immediate compliance to be unreasonable he shall grant extension for not more than one year. In considering such request superintendent to take into account such factors as practicability, availability of equipment and relative benefits to the community. /sec. 120/.

3. Hearing - Owner or operator may request hearing before superintendent and board within 10 days after notice of violation, and not less than 30 days before expiration of time fixed for compliance, and within a reasonable time hearing shall be held. /sec. 130/. After hearing, superintendent may find that condition causing violation no longer exists, or he may reaffirm finding or violation, and he may or may not grant extension of time for compliance, but he shall do so within 10 days after hearing. /sec. 140/.

4. Posting and Sealing - Upon expiration of time fixed for compliance, if superintendent finds that violation then exists he shall notify owner or operator and if 10 days after notice condition still exists he shall designate equipment or premises which is the source thereof, by affixing his seal, posting a notice or otherwise, as unlawful to operate or occupy until compliance is had. Within 10 days owner or operator may appeal to Board of Public Works and it shall hold hearing and may affirm, reverse or modify finding of superintendent and pending decision by Board of Public Works, superintendent shall take no action to designate equipment or premises as unlawful to operate or occupy. /sec. 150/.

C. Penalties

Violation of ordinance punishable by fine not more than $300 or by imprisonment for not more than 90 days, or both. Each day's violation is separate offense. /sec. 170/.

VI. Preventive Programs

None.

TABLE

Process Weight Per Hour (Pounds)	Maximum Allowable Dust Emission Per Hour (Pounds)
100	0.60
1,000	2.95
2,000	4.75
3,000	6.35
4,000	8.00
5,000	9.65
6,000	11.30
7,000	12.90
8,000	14.30
9,000	15.50
10,000	16.65
12,000	18.70
14,000	20.40
16,000	21.60
18,000	22.80
20,000	24.00
25,000	27.40
30,000	30.90
40,000	37.00
50,000	42.50
60,000	48.00
70,000	52.50
100,000	75.00
150,000	112.50
200,000	150.00
250,000	187.50
300,000	225.00

TACOMA, WASH.

I. Ordinance

City of Tacoma, Ordinance No. 15223, January 24, 1955.

II. General Statement

An ordinance to control air pollution by establishing emission standards for smoke and dust, requiring certificates for the operation of fuel-burning and other equipment, and providing penalties for violations. Definition of person includes government corporations, departments, bureaus and agencies.

III. Administrative Organization

A. Section of Air Pollution Control in the Department of Public Works headed by the Air Pollution Control Engineer, who shall:

1. Administer the Section and enforce this Ordinance.
2. Set up administrative rules and regulations.
3. Investigate complaints, make inspections and observations.
4. Issue licenses, certificates, and notices herein provided for.
5. Publish and disseminate information on methods of reducing air pollution. /secs. 3, 5/.

B. Appeal Board of 5 members appointed by the City Manager to hear and determine appeals from decisions of the Air Pollution Control Engineer. /secs. 3, 4/.

IV. Applicability

A. Smoke

Density not to exceed No. 2 Ringelmann except:

1. density not to exceed No. 3 Ringelmann for 3 minutes in any 15 minutes when building a new fire, cleaning a fire or cleaning tubes. /sec. 9A/.
2. in locomotives, when building a new fire, cleaning a fire, or cleaning a flue, density is not to exceed No. 3 Ringelmann except for a period of 9 minutes in any hour. /sec. 12/.

3. smoke from locomotives or other mobile railroad equipment may be of greater density than No. 2 Ringelmann for periods not exceeding 3 minutes in any 15 minutes. /sec. 12/.

B. Dust

Concentration not to exceed 0.85 lbs. per 1,000 lbs. of gases, adjusted to 50 percent excess air for products of combustion, except:

1. installations including special dust separating equipment with a minimal efficiency of 85 percent.
2. installations constructed prior to the effective date of this Ordinance having a dust separating device of at least 75 percent efficiency.
3. violations of this provision are waived during a breakdown of equipment, which may continue in operation if, in the opinion of the Air Pollution Control Engineer, such continued operation will not interfere with the objects of the Ordinance, and due diligence is exercised in effecting repairs. /sec. 9B/.

C. "A person shall not discharge from any source whatever such quantities of air contaminants or other materials into the air which, by reason of their objectionable properties, shall constitute a nuisance as defined by laws of the State of Washington." /sec. 9C/.

V. Enforcement

A. Unlawful Conduct

To interfere with the Air Pollution Control Engineer or his agents in the performance of duty, or to refuse them entrance to premises at reasonable hours. /sec. 10/.

B. Inspection

Inspection by the Air Pollution Control Engineer at such times and at such intervals as he deems necessary is required. Any violation shall be called to the attention of the owner by notice in writing, specifying the section or sections of the Ordinance being violated, and setting the time within which compliance is to be effected. /sec. 8/.

C. Sealing

1. After notice of violation or failure to comply with an order of the Air Pollution Control Engineer, the violator shall be given notice to show cause, within ten days, why the offending equipment should not be sealed. If, at the hearing, the Air Pollution Control Engineer finds that reasonable corrective measures have not been taken, it shall be his duty to order the equipment sealed, after ten days' notice to the offender, until the Ordinance shall be complied with. An appeal may be taken to the Appeal Board within ten days of the decision, and such appeal shall serve to suspend the sealing order until a final decision has been rendered. /sec. 9C/.

2. In the event of an emergency in which the safety of the public is endangered by contaminated air, a joint order to seal the equipment suspected of causing the threat may be issued by the Air Pollution Control Engineer and the Director of Health. Such an order shall remain in force until the emergency has passed, and shall not be stayed by an appeal. /sec. 9C/.

3. In no event shall the seal be broken without written authorization from the Air Pollution Control Engineer. /sec. 9C/.

D. Period of Grace

In all cases except where a nuisance is maintained, where it is impossible for the person in charge of the existing installations to comply immediately with all the provisions of this Ordinance by reason of his inability immediately to procure and install equipment necessary to effect compliance, the Air Pollution Control Engineer may, upon application and a proper showing of the present impossibility of such compliance, extend the time for compliance with any provision hereof for such period or periods as may be necessary under the given circumstances.

Any extension in this section authorized shall not be given or made which shall extend beyond two years from the effective date hereof; provided, however, that if the Appeal Board finds that, because of conditions beyond the control of the person in charge of the installation, compliance will result in an arbitrary and unreasonable taking of property, or in the practical closing and elimination of any business, occupation, or activity, in either case without a sufficient corresponding benefit or advantage to the people in the reduction of air contamination, it shall extend the time for compliance from time to time, not to exceed more than one year for any one period, so long as the condition of impossibility of compliance continues. /sec. 12/.

E. Procedure

1. Appeals may be taken from any ruling of the Air Pollution Control Engineer, either personally or by attorney or agent, within ten days of the ruling complained of, by filing a notice of appeal with the Air Pollution Control Engineer and depositing $10 to cover the costs of the hearing. Such appeal will stay the order appealed from.

2. The hearing shall be held not less than five nor more than ten days from the filing of the appeal, after notice has been given to all interested parties. The Air Pollution Control Engineer shall furnish the Appeal Board with all data pertinent to the subject of the appeal.

3. The Board shall render its decision within ten days from the date of the hearing and shall notify all parties thereof. It shall become effective ten days after such notice has been served, unless appealed from.

4. Should the Appeal Board reverse the order of the Air Pollution Control Engineer, the appellant's deposit shall be refunded.

F. Penalties /sec. 14/.

Violation of ordinance punishable by fine not to exceed $300 or by imprisonment not to exceed 90 days or both.

VI. Preventive Programs

A. Operating Licenses /sec. 6/.

1. Required for any fuel-burning equipment or other equipment capable of emitting polluting cinders, dust, fumes, odors, soot, smoke or waste into the atmosphere, except:

/a/ Motor vehicles.

/b/ Equipment in conjunction with a single family dwelling.

/c/ For any occupancy using space-heating equipment under 200,000 B.T.U. per hr. output.

/d/ Devices installed to remove air pollution.

/e/ Railroad locomotives.

2. Applications shall be made to the City Treasurer accompanied by the prescribed fee, which varies according to the type of installation. Within ten working days from the filing of the application, the City Treasurer shall issue the operating license.

3. All operating licenses shall be subject to revocation by the Air Pollution Control Engineer in the event of a violation of this Ordinance.

WHEELING, W. VA.

I. Ordinance

Air Pollution Control Ordinance, February 8, 1955, as amended December 16, 1958.

II. General Statement

Ordinance regulates the emission of air polluting material, the use of certain fuels, the construction, repair, use, sale of and additions to refuse-burning and fuel-burning devices and the height of stacks. The Air Pollution Control Commission is created. Ordinance provides for fees, permits, inspections, certificates of operation, and penalties for violations.

"Air Pollution" is defined as dust, fumes, gas, mist, odor, smoke, vapor, or any combination thereof, in a quantity or character which constitutes a direct health hazard or detriment, or the contamination of the air in any manner detrimental or harmful to the health, comfort, living conditions, welfare and safety of the inhabitants of the city.

III. Administrative Organization

A. Air Pollution Control Commission of seven members appointed by the Mayor with the duty to recommend rules and regulations.

B. Engineer of the Air Pollution Control Commission appointed by the City Manager with the duty to investigate complaints, make inspections, disseminate educational literature, promulgate rules and regulations, and issue permits.

IV. Applicability

A. Sources

Size and height of stacks shall be approved by the Engineer of Air Pollution Control.

B. Specific Pollutants

1. Smoke - It is unlawful for any person to permit the emission of smoke of a density greater than No. 2 Ringelmann, except that when a boiler, locomotive, or other fuel consuming device is being cleaned out, or a new fire is being built therein, smoke of a density of greater than No. 2 but less than No. 3

Ringelmann shall be permitted for not more than six minutes. No person shall clean out a fuel-consuming device more than three times in any 24 hours. /secs. 2, 3/.

2. It is unlawful for any person to permit or cause the escape of dust, fly ash, soot, vapors, cinders and noxious fumes and gases of such a quantity, in such a place or manner so as to be detrimental to any person or so as to cause injury or damage to property or business or to create an air pollution nuisance, or to cause or allow the emission or passage of a convenient measuring point nearest the stack outlet, dust in the gases to exceed .85 pounds per 1000 pounds of gases, adjusted to 50 percent excess air for products of combustion; except that for fuel-burning equipment constructed subsequent to the effective date of this ordinance, a dust collecting efficiency of not more than 85 percent, and for equipment constructed prior to the effective date of this ordinance, a dust collecting efficiency of not more than 75 percent, shall be required for special dust-separating equipment.

   "No person shall cause, suffer or allow to be discharged from any industrial process, manufacturing operation, material handling, or other similar source, dust in the gases or air to exceed 0.85 lbs. of the gases, except in no case shall more than 85 percent collecting efficiency be required for special dust-separating equipment." /sec. 4/.

C. Volatility

It is unlawful for any person to use in any solid fuel-burning equipment, any solid fuel, the volatile content of which is not 20 percent or less on a dry basis. However, if the volatile content is greater than 20 percent, on a dry basis, it is acceptable if it meets the same smoke production standards as fuel with less than 20 percent volatile content subject to the conditions that plans and specifications for the use of the fuel and an adequate supply of the finished product are made available to the engineer and testing expenses are paid. However, solid fuel having a volatile content in excess of 20 percent, on a dry basis not meeting the above conditions, can be used on approval by the engineer only in heating devices which insure complete combustion of all fuel used, and further designed to prevent any and all air pollution prohibited by this ordinance, and which devices have been previously approved by the engineer. /sec. 9/.

V. Enforcement

A. Nuisance. Emissions of smoke, dust, fly ash, soot, vapors, cinders and noxious fumes and gases in violation of this ordinance, is declared a public nuisance and may be summarily abated by or at the direction of the engineer. /secs. 2, 4/.

B. Unlawful Conduct. It is unlawful for anyone to refuse to comply with or assist in a violation of this ordinance, nor to hinder, resist or interfere with the engineer's enforcement of this ordinance, or to refuse entrance at a reasonable hour to the engineer or his assistants to any premises where this ordinance is being violated, or to refuse to permit inspection of premises to be made pursuant to this ordinance.

C. Inspection. The Engineer shall make original inspections of installations upon their construction, alteration or repair, and, subsequent thereto, shall inspect each installation every three years and at other times when it appears that this ordinance is being violated. Upon satisfactory inspection, the engineer shall issue a certificate of inspection authorizing the continued use of the installation. Failure to possess such a certificate is a violation of this ordinance.

D. Variances. The Engineer shall have the authority to grant a temporary permit for the operation of equipment when the operating party has taken all necessary steps to comply with this ordinance, but compliance cannot be effectively and immediately made. Such permit shall not be for a longer period than six months.

E. Sales Reports. Upon the sale of any refuse- or fuel-burning equipment to be connected to a stack and used within the city, the purchaser shall inform the seller of the address at which the equipment will be used, and the seller shall notify the engineer of such sale and address of intended use within seven days.

F. Sealing. After prior notification of three violations of this ordinance within a 12-month period with respect to emission of air pollutants, the engineer shall notify such violator to show cause, within ten days, why the equipment in question should not be sealed. The engineer shall seal such equipment if he finds that adequate corrective measures have not been taken. The violator may appeal the decision according to the provisions in H. below. /sec. 20/.

G. Hearing. Any person aggrieved by a ruling by the engineer may require the engineer to conduct a full hearing prior to a final decision.

"Any person aggrieved by any decision, ruling, or order of the engineer, may take an appeal to the council of the city within twenty days of said decision, ruling, or order complained of, by filing with the engineer and with the clerk of the city, notice of appeal directed to the Commission, specifying the grounds thereof and the relief prayed for. The engineer shall forthwith transmit to the Commission all papers constituting the record upon which the decision, ruling, or order appealed from is taken. The council shall fix a reasonable time for the hearing of the appeal and give due notice thereof, by mail, to the parties in interest and decide the same within a reasonable time. Such appeal shall act as a stay of any decision, ruling, or order until either approved, modified, or set aside by the council. A fee of $5.00 shall be paid to the treasurer of the city of Wheeling at the time the appeal is filed."

H. Penalties. Upon conviction of a violation of this ordinance, such violator shall be fined $25.00 to $100.00 for each violation and in default of payment of the fine shall be imprisoned not more than 30 days.

VI. Preventive Programs

A. Permits

No fuel-burning plant for production of power and/or heat, refuse-burning equipment, stack, or furnace may be erected, installed, altered or repaired until plans and specifications thereof have been filed with and approved by the engineer and a permit issued by the engineer therefor. A fee is charged for permits and for inspections.

VII. Miscellaneous

It is the engineer's duty to prepare and disseminate informative literature to the public to advise them of the purposes and necessity for smoke preventive efforts.

BELOIT, WISC.

I. Ordinance

Section 10.08 of the Code of General Ordinances of the City of Beloit. Effective - 10 April 1954.

II. General Statement

Smoke, fumes, mist, vapors, dust, lint, fly ash, soot, gases, odors, and other particulate matter or similar air contaminants are regulated in M-1 and M-2 Industrial Districts, by section 10.08 of the Code of General Ordinances. The penalties are derived from another section of the Code.

III. Administrative Organization

The Department of Health.

IV. Applicability

A. Sources /See IV B/.

B. Specific Pollutants

In M-1 and M-2 Industrial Districts all commercial and industrial uses permitted shall comply with the following standards and requirements /sec. 10.08/:

1. Smoke, fumes, mist, vapor or similar air contaminants from any source whatsoever shall not be discharged into the atmosphere for a period or periods aggregating more than 10 minutes in any one hour which is darker than No. 1 Ringelmann in M-1 districts, and No. 2 Ringelmann in M-2 districts, or of such opacity as to obscure vision to a degree equivalent to No. 1 Ringelmann.

2. Dust, lint, fumes or other particulate matter resulting from industrial or commercial processes, when emitted from chimneys, stacks, exhaust ducts, vents or other openings shall not exceed in M-1 districts:

Process Wt. /hr.	Maximum allowable discharge /hr.
100#	0.46#
500#	1.77#
1,000#	2.80#

2,500#	4.64#
5,000#	6.67#
10,000#	10.00#
20,000#	16.19#
40,000#	28.30#
60,000# or more	40.00#

Process weight is the total weight of all materials introduced into any specific process which may cause a discharge into the atmosphere. Solid fuels charged are considered part of the process weight, but liquid and gaseous fuels and combustion air are not.

Process weight per hour is derived by dividing the total process weight by the number of hours in one complete operation, excluding any time during which the equipment is idle.

In M-2 districts, no definite maximum allowable discharge is established. However, existing industries shall not construct new facilities which would emit particulate /matter/ at a higher rate of discharge than their existing facilities, and further, no industry may emit particulate matter which is so noxious or offensive as to effect /sic/ the continuation, extension or establishment of other lawful industries or businesses in its neighborhood.

When resulting from unenclosed operations such as quarrying, storage yards and similar outdoor operations, /they/ shall be so controlled that particulate matter does not normally blow onto adjacent property.

3. Fly ash, soot and other solid products of the combustion of fuel in a boiler when calculated at 12 percent carbon dioxide shall not exceed two-tenths grains per cu. ft. gas in M-1 districts, and four-tenths grains per cu. ft. gas in M-2 districts.

4. Distinct obnoxious odors, unhealthful gases or fumes shall not be emitted in such quantities as to be discernible in any adjacent residential or commercial zone.

V. Enforcement

A. "Inspections and laboratory are the procedures followed in obtaining compliance with standards.

B. Penalties

'Any person violating any of the provisions of this chapter shall, on conviction thereof, be fined a sum not exceeding $100.00. Each day, after one week from date of conviction, that a violation of the ordinance continues, shall be deemed a separate offense".

VI. Preventive Program

None.

MADISON, WISC.

I. Ordinance

City of Madison, Wisconsin, and one mile therefrom; section 17.97 of the General Ordinances, as amended July 14, 1958.

II. General Statement

The ordinance creates the office of Smoke and Heating Plant Inspector; regulates the emission of dense smoke, noxious gases, acids, dust, soot, fly ash, and certain other material; provides for reports of sales of fuel-burning equipment; lists the duties of the Smoke and Heating Plant Inspector; and provides for penalties for violations.

III. Administrative Organization

Smoke and Heating Plant Inspector appointed by the Mayor, under the direction of the Building Inspection Superintendent. The Smoke and Heating Plant Inspector shall enforce this ordinance, inspect for nuisances, and prescribe remedies for nuisances. /sec. 17.97 /1/, /2/ and /7/.

IV. Applicability

A. Sources /See IV B/.

B. Specific Pollutants

1. The emission of smoke of a density equal to or greater than No. 2 Ringelmann within the city or one mile therefrom from the smokestack of any building, roundhouse or premises, or from any open fire, or portable boiler, steam shovel, portable crane, derrick, hoist, tar or asphalt kettle or other similar machine, except for nine minutes or less of No. 2 smoke, or six minutes or less of smoke in excess of No. 2 smoke in any 60 minutes when the firebox is being cleaned out or a new fire is being built therein, or from any locomotive in excess of one continuous minute after said locomotive is in or ready for service, is prohibited. /sec. 17.97 /3/, /4/ /.

2. No person shall cause or allow the emission of soot, fly ash or smoke of a density equal to or greater than No. 2 Ringelmann for six minutes or more in any 60 minutes, or from any locomotive after it is in or ready for service for a period of or periods in excess of one continuous minute in any 60 minutes.

Dust or fly ash emission shall not be in excess of of 0.85 pounds per 1,000 pounds of stack gases adjusted to 12 percent carbon dioxide. /sec. 17.97 /5/ /a/ /.

3. No person shall cause or allow the escape into the open air of noxious gases, acids, dust, or other material, except material identified in IV-2, above, in such places, or manner and quantity as to cause injury, detriment or nuisance to the public or to endanger the health or safety of the public or to cause physical damage to property. /sec. 17.97 /5/ /c/ /.

V. Enforcement

A. Nuisance

Violation of IV-B, 1, is declared a public nuisance and may be summarily abated. /sec. 17.97 /3/ /.

B. Inspections

When a complaint is made that this ordinance is being violated, the Smoke and Heating Plant Inspector shall inspect the premises and determine the cause involved. The Smoke and Heating Plant Inspector shall notify the person responsible and prescribe a remedy for the violation, providing reasonable opportunity for compliance with the notice. /sec. 17.97 /7/ /.

C. Sales Reports

All persons engaged in the business of selling fuel-burning devices for producing heat or power, which are required to be connected to a chimney shall report the sale of every such device to be installed within the city or one mile therefrom. The buyer of such device shall inform the seller, by a written statement, of the address at which such device is to be installed. This does not apply to wholesale transactions made for the purpose of resale. /sec. 17.97 /6/ /.

D. Penalty

Any person who violates this ordinance is subject to a fine of from $5 to $100. /sec. 17.97 /9/ /.

VI. Preventive Programs

None.

MILWAUKEE COUNTY, WISC.

I. Ordinance

General Ordinances of County of Milwaukee. Chapter 89. /Eff. Jan. 4, 1962/.

II. General Statement

Ordinance creates a department of Air Pollution Control, regulates emission of smoke and solids, liquids, gases, fumes, acids, burning embers, sparks, particulate wastes or dusts, regulates construction, reconstruction, repair, use of and additions to processes, control equipment and devices and application of fuels and raw materials to equipment and processes; requires notice of purchases and sales of such equipment; establishes fees for examination of plans, inspections, tests, issuance of permits and certificates of deposit; establishes appeal procedures; provides for injunctions and provides penalties. Ordinance defines person to include any government corporation, department, bureau, agency or other entity recognized by law as the subject of rights and duties.

III. Administrative Organization

A. Department of Air Pollution Control created /sec. 89.01/ duties of director of department include:

1. Investigation of complaints, making of inspections and observations of air pollution conditions.

2. Issuance of permits, certificates and notices; keeping of applications, specifications, plans, permits, certificates, complaints, violations and other records on file.

3. Examination of plans or specifications of new buildings and for alteration of existing buildings to ensure compliance with ordinance.

4. Examination of application and plans or specifications for construction, installation or alteration of process or control equipment and if meeting requirements of regulations, issuance of installation permit.

5. Inspection of installation of all equipment for which permit issued, and when found to be completed in accordance with regulations, issuance of operating permit, and thereafter the issuance of certificate of operation.

6. Publication and dissemination of information on methods of air pollution.

7. Enlistment of cooperation of civic, technical, scientific and educational societies.

8. Institution of proceedings to prosecute violations of ordinance, to compel prevention and abatement of emission of air pollutants and nuisances arising therefrom. /sec. 89.03/.

9. Preparation of rules and regulations for installation and operation of process or control equipment and similar devices; as to fuels to be used for various types of equipment, as to necessary auxiliary devices. These rules and regulations to be made with or without advice of Advisory Board, but Director must present them to County Board of Supervisors for consideration. When adopted by County Board, rules and regulations have the effect of an ordinance. County Board with or without recommendation of Director may alter, amend or rescind such rules and regulations and promulgate additional rules and regulations. Effective date is 30 days after publication in official county newspaper. /sec. 89.04/.

B. Advisory Board of 5 persons created. /sec. 89.01/. Duties of Advisory Board include:

1. Acting as advisor to the Director.

2. Considering and making recommendation as to such rules and regulations as may be presented by Director.

3. Considering and making recommendations to County Board of Supervisors on matters in best interest of effective air pollution control. /sec. 89.03/.

C. Appeal Board of 5 persons created. Board may adopt, amend, or repeal such of its procedural rules and regulations as it deems necessary to carry into effect its duties. Rules and regulations and orders, requirements, decisions or determinations of Appeal Board must be filed in Department and with Chairman of County Board and open for public inspection. /sec. 89.01/.

IV. Applicability

A. Sources

1. Solid fuel-burning equipment must be equipped for mechanical firing with a stoker, pulverized fuel burner or other approved device, or a certified solid fuel must be used.

2. All installations using pulverized fuel burners, spreader type stokers or similar solid fuel suspension-burning type of equipment, must be provided with approved dust-separating equipment. Exception for stand-by equipment used in emergency and for period or periods not exceeding 10 percent of any year.

3. Where existing process or control equipment found to be incapable of operation within requirements of ordinance, changes shall be made in accordance to orders issued by Director.

4. Exception to section provided for steamboats. /sec. 89.09/.

5. All process or control equipment, related heat-absorbing equipment, appurtenances, fuel or raw materials shall be suitable for operations under sec. 89.11 /emission limitations and standards/.

6. Where such equipment is found to be unsuitable for lawful operation under ordinance, Director may order changes as may be necessary to secure compliance with emission limitations and standards. The observation of 3 violations of sec. 89.11 in any 12 months deemed sufficient cause for finding such equipment, appurtenances, fuel or raw materials unsuitable and for making of order. Person receiving order must notify Director of period of time needed to comply and must submit plans and specifications of work to be done or specifications of fuel to be used. Where required, installation, or operating permit or certificate of operation must be secured.

7. Where existing process or control equipment, related heat-absorbing equipment, appurtenances or class of fuel are in violation of sec. 89.06 /sale, use, consumption of certified fuels/ but not in violation of sec. 89.11 in preceding 12 months, such equipment may continue to operate provided /a/ after securing operating permit, it is demonstrated to Director's satisfaction that such equipment and fuel complies with sec. 89.11; /b/ use of such equipment and fuel

continued under temporary certificate of operation.

8. Where new or existing process or control equipment are at variance with sec. 89.09 and operation in violation of sec. 89.11. Such equipment may be operated only under temporary certificate of operation. /sec. 89.09/.

B. Specific Pollutants

1. In general, ordinary operation: Emission from any stack or chimney process or control equipment, internal combustion engine, premises, open fire or any other source, smoke the shade or density equal to or greater than No. 2 Ringelmann, except smoke equal to No. 2 Ringelmann may be emitted for 2 minutes in any 30 minutes and except when firebox is being cleaned out or a new fire is being built, or when breakdown in equipment occurs and emission is not preventable. Clean outs; new fires; smoke shade or density equal to but not exceeding No. 2 Ringelmann, may be emitted not exceeding 9 minutes in any one hour, or smoke of unlimited shade, density or opacity may be emitted not exceeding 5 minutes in any one hour. Emission of smoke under this paragraph not cumulative. Exception made for railroad locomotives in or ready for service and steamships.

2. Locomotives - In or ready for service: Smoke of unlimited shade or density may be emitted from any railroad locomotive in or ready for service not to exceed 45 seconds in any 3 minutes. Smoke the shade or density equal to, but not exceeding No. 2 Ringelmann may be emitted.

   Clean outs, new fires, diesel startup: When firebox is being cleaned out or a diesel locomotive is first started up or a diesel locomotive which has been idling over one shift is put back into use, or a new fire is being built in a railroad locomotive, smoke the shade or density equal to but not greater than No. 2 Ringelmann may be emitted not to exceed 9 minutes in any one hour, or smoke of unlimited shade, density or opacity may be emitted not exceeding 5 minutes in any one hour; or smoke of unlimited shade or density may be emitted into open air for a period not exceeding 5 minutes in any one hour.

   No person may emit from railroad locomotive while firebox is being cleaned out or a diesel locomotive is first started up, or a diesel which has been idling over one shift is put back into use or a new fire is being built therein, smoke the shade, density or opacity of which exceeds limits of this paragraph.

3. Steamships; - When navigating or maneuvering: Steamships while navigating or maneuvering within County outside Milwaukee Bay breakwater may emit smoke of unlimited shade, density or opacity for period not more than 3 minutes in any 15 minutes. During remainder of 15 minutes, smoke less than No. 2 Ringelmann, or of such opacity as to obscure observer's view less than No. 2 Ringelmann may be emitted.

Steamships docked: Steamships docked within county may emit smoke less than No. 2 Ringelmann shade or density, or of such opacity as to obscure observer's view less than No. 2 Ringelmann. Exception during last 15 minutes before steamship leaves dock. It may emit smoke not exceeding No. 3 Ringelmann for period not to exceed 3 minutes, but provided further, that permitted emission is not cumulative to the emission permitted when clean-outs occur or new fires made.

Self-unloading steamships: Steamships equipped with self-unloading machinery operated by power from main plant may, while docked in County and while machinery is operating, emit smoke of unlimited shade, density, or opacity for 3 minutes in any 12 minute period. During remainder of 12 minutes steamship may emit smoke less than No. 2 Ringelmann shade or density, or of such opacity as to obscure an observer's view less than No. 2 Ringelmann. Clean-outs; New Fires: When firebox is being cleaned out or new fire is being built in steamship or tugboat or they are being inspected by Marine Inspector, they may emit smoke equal to No. 2 Ringelmann shade or density, or of such opacity as to obscure observer's view to degree equal to or less than No. 2 Ringelmann, for period not to exceed 9 minutes in any one hour or smoke of unlimited shade, density or opacity not to exceed 5 minutes in any one hour. Emission of smoke under this paragraph not cumulative.

Exemptions; distress operation; first annual entry into harbor: Provisions relating to steamships not applicable to steamship navigated or maneuvered in county for sole purpose of protection from unsafe conditions of navigation, provided that when unsafe conditions cease steamship at once is subject to provisions. Provisions not applicable to steamship making first call at Port of Milwaukee in any calendar year.

4. Tugboats ; when navigating or maneuvering under own power: Tugboat when navigating or maneuvering under own power and not engaged in towing steamship may emit smoke of unlimited shade, or density or opacity for not more than 3 minutes in any 15 minute period. During remainder of such period smoke, shade or density less than No. 2 Ringelmann or of such opacity as to obscure an observer's view to degree less than No. 2 Ringelmann may be emitted.

   When towing steamships: May emit smoke of unlimited shade, density or opacity for not more than 3 minutes in any 12 minutes and during remainder of such 12 minutes smoke, shade or density less than No. 2 Ringelmann or of such opacity as to obscure observer's view to degree less than No. 2 Ringelmann may be emitted.

   While docked: May emit smoke of unlimited shade, density or opacity for not more than 3 minutes in any 15 minutes. During remainder of 15 minutes smoke, shade or density less than No. 2 Ringelmann may be emitted, or of such opacity as to obscure observer's view less than No. 2 Ringelmann may be emitted. Emissions not cumulative.

5. Dust Limitations - Cannot emit into open air from any process or control equipment, or allow to pass measuring point in stack dust in gases to exceed 0.85 lb. per 1,000 lbs. of gases, adjusted to 12 percent CO2 content for products of combustion.

6. Ascertainment of dust quality - Amount of dust or solids determined according to Test Codes for Dust-Separating Apparatus and for determining Dust Concentration in a Gas Stream of A.S.M.E.

7. Disposal of Dust - Dust from dust-separating equipment and from other sources in installation not reclaimed shall be moistened and hauled in an approved manner to county dump or other approved point of disposal. If dust to be reclaimed must be handled in manner satisfactory to Director. /sec. 89.11/.

V. Enforcement

A. Nuisance

Causing or allowing emission into open air from any process or control equipment, internal combustion engine, premises or open fire any air pollutants in a manner to cause injury, detriment, nuisance or annoyance, or to endanger the health or safety of any person or to cause or have a natural tendency to cause injury or damage to business or property. /sec. 89.11 /8/ /.

B. Sales and Reports of Sales

1. Sale, delivery for use or use in county of uncertified solid fuel for hand-fired equipment is prohibited. Uncertified solid fuel can be used only in approved mechanical fuel-burning equipment. Each seller of volatile solid fuel must furnish buyer with bill of sale or delivery slip which plainly records date of delivery, names of seller and buyer, quantity delivered, and whether fuel is certified solid fuel. Section does not apply to steamships. /sec. 89.06/.

2. Sellers of process or control equipment must report to Director the sale of such equipment to be installed, and purchaser of equipment must give seller a signed written statement setting forth address of building in which equipment is to be installed. Seller must give written report to Director within 7 days after sale, and it must show name and address of purchaser and location in which equipment is to be installed or used.

   Director has power to obtain additional information. Section does not apply to wholesale transactions made for resale. /sec. 89.08/.

C. Procedure

1. Sealing: When person notified of 3 or more observed and recorded violations of sec. 89.11 /emission of air pollutants/ within consecutive 12 month period, Director shall within 20 days notify person to show cause before Director on day not less than 10 nor more than 20 days from notice, why equipment should not be sealed. Notice to be given to persons liable for emission. Person notified may appear and be heard. If Director finds that adequate corrective means and methods have not been employed to correct condition, he must seal equipment until an installation permit and operating permit have been applied for and issued. Appeal may be made to Appeal Board within 10 days and the appeal shall stay the sealing. No

equipment shall be sealed until expiration of time for appeal. No one may violate seal unless authorized by Director. /sec. 89.11 /9/ /.

2. Appeals to Appeal Board: Person taking exception to any decision of Director may file appeal with county clerk 10 days after decision complained of; notice of appeal to specify decision or order appealed from reasons for appeal and relief sought. Deposit of $15.00 must be filed. Copy of notice of appeal served on Director who shall promptly furnish Board with all papers relating to order or decision appealed. Date of hearing to be not less than 5 nor more than 10 days after date of filing. Notice to be given to Director and party. Person may be represented by counsel or agent. Appeal Board within 10 days after hearing, by written decision, affirm, modify or set aside decision or order. Action of Appeal Board binding when reversed by Circuit Court. If Director's order affirmed, deposit forfeited to county, if Director's order modified or reversed and Director does not within 10 days commence proceedings in Circuit Court, deposit to be refunded to appellant. If proceedings commenced forfeiture or refunding to abide result of decision. Appeal Board empowered to extend grace period; no deposit required for application for extension. /sec. 89.17/.

3. Period of Grace - When person violating any of the provisions relating to emission of air pollutants produces satisfactory evidence that all steps have been taken to comply with ordinance, but that he cannot obtain proper equipment or device, Director has direction to allow a period not exceeding 12 months from application therefor, within which necessary equipment or device is to be acquired or installed. Where it appears that equipment will not be delivered in grace period, person may apply to Appeal Board for extension, serving notice on Director or Board shall consider request within 20 days, if it finds good cause it may by written order extend grace period for anytime not to exceed one year from end of grace period granted by Director. During grace period granted by Director or Board person violating ordinance not subject to fines or penalties in ordinance, provided that where person fails to conform with ordinance in the time allowed he is subject to all fines and penalties in ordinance dating from beginning of grace period. /sec. 89.15/.

D. Unlawful Conduct

Interference with Director in performance of duties. /sec. 89.12/.

E. Penalties

1. Persons owning, operating in charge or control of any equipment individually and collectively liable. /sec. 89.13/.

2. Violation of ordinance leads to fine of not less than $25.00 nor more than $50.00 for first violation, not less than $50.00 nor more than $100.00 for each succeeding violation, together with costs of the action. In default of payment, imprisonment for period not to exceed 30 days. Each day's violation is separate offense.

3. Unlawful emission of air pollutants from each stack is separate offense.

4. Where Director finds that persons have repeatedly violated ordinance he may make written request to corporation counsel to commence action to enjoin and restrain continued violation. /sec. 89.14/.

VI. Preventive Programs

A. Permits

1. Installation Permits - Construction, installation, reconstruction or alteration of any process or control or related equipment prohibited unless application, including not less than two sets of plans and specifications, approved by Director and an installation permit issued. Plans and specifications to state form and dimensions of process or control equipment, description of and dimensions of buildings where equipment to be located, character of fuel to be used, kind of raw materials to be processed, expected air pollutant emission rate. Application to be approved or rejected within 10 days after filing. Violation of installation permit sufficient cause for Director to stop all work and seal the installation. Permit void where construction, installation, reconstruction or alteration not commenced within one year of installation permit.

2. Operating Permits - Operating of new or altered process or control or related equipment for which installation permit required or issued prohibited

until inspection made by Director and operating permit issued. Person responsible for installation construction or alteration required to notify Director when work completed and ready for final inspection. Operating permit may be issued for existing process or control equipment where such equipment is found to be at variance with fuel and fuel burning equipment regulations. Director authorized to seal equipment in operation for which permit not obtained.

3. Certificate of Operation - After issuance of operating permit and Director satisfied that equipment can be operated in compliance with ordinance, he shall issue a certificate of operation which must be posted on or near installation. Certificate to identify equipment and shall specify class of fuel or type of raw materials for which equipment designed is tested successfully. Director may waive demonstration or test operation, but such waiver provides no immunity from prosecution of violations. Where certificate of operation refused, Director may seal equipment until ordinance complied with.

   Temporary certificate of operation may be issued for twelve month maximum period. Mandatory revocation of three violations of nuisance provision occur.

   Issuance of any installation, operating permit or certificate of operation will not exempt person from prosecution for violation of ordinance.

   Section does not apply to steamships or locomotives. /sec. 89.05/.

VII. Miscellaneous

Coordination of municipal and county regulations. Unless municipality in county has an ordinance at least equally restrictive, no permit for erection, construction or alteration of any building, plant or structure related in any manner to process or control equipment shall be issued by any municipal department until Director has issued a permit or has indicated that plans comply with ordinance. /sec. 89.18/.

RACINE, WIS.

I. Ordinance

City of Racine, Ordinance secs. 23.03, 23.035, Oct. 21, 1953.

II. General Statement

An ordinance prohibiting owners, lessees, occupants or corporate officers and agents from emitting or permitting the emission of dense smoke from buildings, certain fuel-burning equipment and for kettles, as well as the emission of dense smoke, soot, coal dust or cinders from stacks, chimneys and furnaces. It also imposes penalties for violations.

III. Administrative Organization

A. Police officers and sanitary inspectors shall be responsible for the enforcement of the Ordinance and shall have the power to arrest any person violating its provisions. /sec. 23.03 /4/ /.

B. Sanitary inspectors shall enforce the Ordinance and shall have the power to arrest immediately any person violating its provisions. /sec. 23.035 /2/ /.

IV. Applicability

A. Sources

1. The Ordinance shall apply to boats, stationary and locomotive engines, engines used in dredging or driving piles, portable boilers or furnaces, tar kettles, stacks, chimneys or furnaces which emit dense smoke, soot, coal dust or cinders in excess of 5 minutes in any one hour.

2. All power and heating plants excepting those under 10 horsepower must be so equipped as to enable the operator to determine whether dense smoke is being emitted without leaving the boiler or furnace room. Acceptable means of fulfilling this requirement are:

/a/ A window giving an unobstructed view of the top of the stack.

/b/ A mirror so placed as to reflect the top of the stack and visible from the boiler or furnace room.

/c/ A smoke indicator, alarm or recorder approved by the Examining Board of Stationary Engineers; if the boiler's capacity is between 50 and 300 horsepower the means of observation shall be either a smoke indicator or alarm; if it exceeds 300 horsepower a recorder shall be used. For the purpose of this section twelve square feet of boiler heating surface shall be equivalent to one horsepower. /sec. 23.035 /1/ /.

B. Specific Pollutants

Emissions of dense smoke, soot, coal dust or cinders are prohibited.

V. Enforcement

A. Inspection

Enforcement officers shall have the right to enter, in the performance of their duties, at all reasonable hours, all premises where any dense smoke, soot, coal dust or cinders are emitted or where any such boiler or engine is located. /sec. 23.03 /5/ /.

B. Penalties

1. Owners, lessees, corporate agents, officers, or managers of corporations operating or in charge of any of the sources listed in IV A which emit dense smoke shall be subject to fines of $25 to $100 for every first offense; and in default of payment, shall be subject to imprisonment for a term not to exceed 6 months. /sec. 23.03 /1/ /.

2. Any person, firm or corporation emitting or permitting to be emitted soot, coal dust or cinders from any chimney stack or furnace shall be subject to fine from $10 to $100, or to imprisonment for not more than 60 days for each offense, and every day of 24 hours, in which such nuisance shall continue shall be deemed a separate offense. /sec. 23.03 /3/ /.

3. Any person failing to install observation equipment as provided in IV A 2 shall be subject to a fine of $50 to $200, and in default of payment shall be subject to imprisonment for not more than 60 days for each offense. Each day's violation of that section or any part thereof, shall constitute a separate offense. /sec. 23.035 /3/ /.

VI. Preventive Programs

None.

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